

****FIRE FIGHTER I****

CERTIFICATION TEST

DOCUMENTATION BOOKLET

MSU Fire Services Training School

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Website: <http://www.montana.edu/wwwfire>

This certification process is accredited by:



International Fire Service Accreditation Congress (IFSAC)
and
National Board on Fire Service Professional Qualifications (NPQS)

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Fitness Requirements

The signature of the Chief of the Fire Service Organization is evidence to FSTS that the candidate has met local requirements with regard to good physical and mental condition and has a background indicating good moral character. The local chief should ensure that the candidate has an appropriate background and physical and mental condition prior to beginning this test. NFPA 1582 (*Medical Requirements for Fire Fighters*) is recommended for use by local authorities in assessing the physical and medical evaluation of candidates.

Chief Officer’s Signature

Date

Facilities and Equipment Compliance:

The signature of the chief of the Fire Service Organization is evidence to FSTS that the facilities and equipment used for testing are in compliance with applicable NFPA Standards.

Chief Officer’s Signature

Date

Signature Verification:

For the purpose of signature verification to sign off in this test booklet I certify my signature as:

Signed:

Printed Name:

If you have questions, contact the FSTS at (406) 761-7885 during office hours, or any of the following representatives:

Doug Lobaugh	(406) 750-6046	Great Falls
Dave Mason	(406) 461-0570	Helena
Jerry Prete	(406) 461-2274	Miles City
Craig Jeppson	(406) 498-5444	Missoula
Ed Burlingame	(406) 249-0745	Columbia Falls
John Culbertson	(406) 771-4328	FSTS Office - Great Falls

Upon Completion of this Test Documentation Booklet, make a copy for your records, then give to an FSTS Staff Member OR send to FSTS via certified mail. FSTS Address: MSU Fire Services Training School - Certification Program, 750 6th Street SW–Ste 205, Great Falls, Montana 59404-3297

Duration of Certification:

Accredited certifications issued by the Montana Fire Services Training School do not have an expiration date. However, for purposes of progression within the FSTS certification system, a certification is recognized for five years from the test completion date. The policy regarding this is part of the Montana Fire Service Professional Qualifications Certification System, which is adopted by the Fire Services Training School Advisory Council. The policy is shown below.

304 Duration of Certification

- 304.1 Certifications issued under this system are recognized for purposes of progression within the system from the test completion date to the date a revised testing process is implemented by FSTS, however, certification will be recognized for progression purposes for a minimum of 5 years from its date of issuance.

- 304.2 Individuals with certifications which have lapsed under 304.1, are treated as new to the level or system and must be re-tested to the current standard for a given level.

Definitions and Acronyms - The following definitions and acronyms for the terms indicated are intended for use with the Certification Program.

Approved - Acceptable to the FSTS or their authorized representative.

Authority having jurisdiction - Fire Services Training School (FSTS).

Candidate - The person who has made application for certification.

Define - To describe the basic qualities and principles.

Demonstrate - To show by actual use or simulation.

EAP - Employee Assistance Program

Fire company - Subpart of FSO to which an individual is assigned.

Fire department - An agency of government charged with primary fire protection responsibility within a city, county, reservation or district.

FSO - Fire service organization.

FSTS Website – <http://www.montana.edu/wwwfire>

Element – A single item, task or tactic that is tested under this program.

Identify - To physically select, indicate, or explain verbally or in writing, using standard terms recognized by the fire service.

IMS - Incident Management System

May - The term is used to state a permissive use or an alternative method to a specified requirement.

Objective - A goal that is achieved through the attainment of a skill, knowledge, or both, which can be observed or measured.

Qualified - Having satisfactorily completed the requirements of the objectives.

PAR - Personnel Accountability Report

PASS - Personal Alert Safety System

Safely - To perform the objective without unreasonable risk or injury to self, others, apparatus or equipment.

Shall - The term indicates a mandatory requirement.

Swiftly - The time, as determined by the qualified evaluator or FSTS that it takes to perform the element satisfactorily.

Technique - The systematic procedure by which a task is accomplished.

With competence - Possessing the knowledge, skill, and judgment needed to perform indicated objectives satisfactorily.

Fire Fighter I - Locally Tested Portion
Administered by Local Chief Officer or Certified Instructor

5.1 General.

5.1.1 General Knowledge Requirements. (Resource: 6th Edition IFSTA ESSENTIALS of Fire Fighting and Fire Department Operations, Chapters 1,2,7,18; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 1, 2, 9)

Describe the organization of the fire department.

Candidate will provide a written narrative describing the operations and administrative staffing and duties of their Fire Service Organization (FSO).* Resource: Your FSO Leadership

Signed _____ Date: ____/____/____

Explain the Fire Fighter I's role as a member of the organization.

Candidate will provide a written narrative describing the role of fire fighter in their FSO.*
Resource: Your FSO Leadership

Signed _____ Date: ____/____/____

Explain the mission of the fire service and of the local fire department.

Candidate will provide a narrative describing the mission of their FSO.* Resource: Your FSO Leadership

Signed _____ Date: ____/____/____

Explain the function of a standard operating procedure.

Candidate will provide a written narrative explaining the function of a standard operating procedure.
(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 1, NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 1)

Signed _____ Date: ____/____/____

Explain fire department rules and regulations that apply to the Fire Fighter I.

Candidate will provide a written narrative which explains the rules and regulations that directly affect the Candidate. (The rules and regulations must, at a minimum, include the areas of duties and responsibilities, evaluation, and discipline.*) Resource: Your FSO Leadership

Signed _____ Date: ____/____/____

Explain the value of fire and life safety initiatives in support of the fire department mission and to reduce fire fighter line-of-duty injuries and fatalities.

Candidate will provide a written narrative explaining the value of fire and life safety initiatives as it relates to their fire service organization. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 21, NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 2)

Signed _____ Date: ____/____/____

Explain the role of other agencies that may respond to emergencies.

Candidate will provide a written narrative explaining the role of EMS, law enforcement and other fire agencies that may respond to emergencies. Resource: Your FSO Leadership

Signed _____ Date: ____/____/____

Describe the aspects of a member assistance program.

Candidate will provide a written narrative explaining the aspects of a member assistance program. Resource: Local EAP or EAP information packet from FTS

Signed _____ Date: ____/____/____

Explain the importance of physical fitness and a healthy lifestyle to the performance of the duties of a firefighter.

Candidate will provide a written narrative explaining the importance of physical fitness and a healthy lifestyle relating to the performance of the duties of a fire fighter. Resource: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 2, NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 2)

Signed _____ Date: ____/____/____

Describe the responsibilities of a fire fighter as required by NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, and adopted by the Candidate's FSO.

Candidate has been provided with a written copy of the FSO's responsibilities of fire fighters as required by NFPA 1500 and will provide a written narrative describing those responsibilities.

(Resource: NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, and leadership or procedures of FSO; Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 1&2; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. Chapter 2)

Signed _____ Date: ____/____/____

5.2 Fire Department Communications.

5.2.1 Initiate the response to a reported emergency, given the report of an emergency, fire department standard operating procedures, and communications equipment, so that all necessary information is obtained, communications equipment is operated correctly, and the information is promptly and accurately relayed to the dispatch center. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 3 NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed CH 4)

Candidate has initiated the response to a reported emergency.

Signed _____ Date: ____/____/____

5.2.2 Receive a business or personal telephone call, given a fire department business phone, so that procedures for answering the phone are used and the caller's information is relayed. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 3; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 4) Candidate has demonstrated receiving a business or personal telephone call.

Signed _____ Date: ____/____/____

5.3 Fireground Operations.

5.3.3 Establish and operate in work areas at emergency scenes, given protective equipment, traffic and scene control devices, structure fire and roadway emergency scenes, traffic hazards and downed electrical wires, an assignment, and SOPs, so that procedures are followed, protective equipment is worn, protected work areas are established as directed using traffic and scene control devices, and the fire fighter performs assigned tasks only in established, protected work areas.

Signed _____ Date: ____/____/____

5.3.7 Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment, attack line, and hand tools, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are overhauled, and the fire is extinguished. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 17; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 22)

Signed _____ Date: ____/____/____

5.3.8 Extinguish fires in exterior Class A materials, given fires in stacks or piles, small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 17; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS 3rd Ed, CH 22)

Signed _____ Date: ____/____/____

5.3.10 Attack an interior structure fire operating as a member of a team, given an attack line, ladders when needed, personal protective equipment, tools, and an assignment, so that team integrity is maintained, the attack line is deployed for advancement, ladders are correctly placed when used, access is gained into the fire area, effective water application practices are used, the fire is approached correctly, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, the correct body posture is maintained, hazards are recognized and managed, and the fire is brought under control. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 17; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 22)

Signed _____ Date: ____/____/____

5.3.13 Overhaul a fire scene, given personal protective equipment, attack line, hand tools, a flashlight, and an assignment, so that structural integrity is not compromised, all hidden fires are discovered, fire cause evidence is preserved, and the fire is extinguished. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 18; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 19)

Signed _____ Date: ____/____/____

5.3.14 Conserve property as a member of a team, given salvage tools and equipment and an assignment, so that the building and its contents are protected from further damage. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 18; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 19)

Signed _____ Date: ____/____/____

5.3.15 Connect a fire department pumper to a water supply as a member of a team, given supply or intake hose, hose tools, and a fire hydrant or static water source, so that connections are tight and water flow is unobstructed. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 15; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 16)

Signed _____ Date: ____/____/____

5.3.16 Extinguish incipient Class A, Class B, and Class C fires, given a selection of portable fire extinguishers, so that the correct extinguisher is chosen, the fire is completely extinguished, and correct extinguisher-handling techniques are followed. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 7; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed CH 8)

Signed _____ Date: ____/____/____

5.3.17 Illuminate the emergency scene, given fire service electrical equipment and an assignment, so that designated areas are illuminated and all equipment is operated within the manufacturer's listed

safety precautions. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 10; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 19)

Signed _____ Date: ____/____/____

5.3.19 Combat a ground cover fire operating as a member of a team, given protective clothing, SCBA if needed, hose lines, extinguishers or hand tools, and an assignment, so that threats to property are reported, threats to personal safety are recognized, retreat is quickly accomplished when warranted, and the assignment is completed. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops CH 17; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 21)

Signed _____ Date: ____/____/____

5.3.20 Ropes and Knots

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapter 8; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. Chapter 10)

Explain the primary usage of each of the following:

1) bowline _____

2) clove hitch _____

3) figure eight on a bight _____

4) half hitch _____

5) becket or sheet bend _____

6) safety knot _____

Given each of the following situations, describe the types of knots to use:

Hoist a 14' roof ladder to a third floor roof :

To hoist a Pike Pole to a roof : _____

Signed _____ Date: ____/____/____

Distinguish between life safety and utility ropes.

Candidate will provide a written narrative explaining the characteristics and uses of life safety and utility ropes. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 8, NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 10)

Signed _____ Date: ____/____/____

Candidate will provide a written explanation of the reasons for placing a rope out of service.

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 8, NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 10)

Signed _____ Date: ___/___/___

Given the proper size and amount of rope the Candidate has demonstrated each of the following:

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 8, NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 10)

Bowline:

Signed _____ Date: ___/___/___

Clove hitch:

Signed _____ Date: ___/___/___

Figure of Eight on the Bight:

Signed _____ Date: ___/___/___

Becket or Sheet Bend:

Signed _____ Date: ___/___/___

Safety Knot:

Signed _____ Date: ___/___/___

Candidate has demonstrated tying approved knot and hoisting tool at least 10 feet.

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 8, NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 10)

Signed _____ Date: ___/___/___

Candidate has demonstrated using a rope to tie ladders, hose and other objects to secure them.

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 8, NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 10)

Signed _____ Date: ___/___/___

5.5 Preparedness and Maintenance

5.5.1 Clean and check ladders, ventilation equipment, self-contained breathing apparatus (SCBA), ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer's or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported

otherwise. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 6;8;10;11;12;13;18 ; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed. CH 2;9;13;15;19)

Signed _____ Date: ___/___/___

5.5.2 Clean, inspect, and return fire hose to service, given washing equipment, water, detergent, tools, and replacement gaskets, so that damage is noted and corrected, the hose is clean, and the equipment is placed in a ready state for service. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., CH 15; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., CH 170)

Signed _____ Date: ____/____/____

Hazardous Materials Awareness

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Website: www.montana.edu/wwwfire/hazmattest.html

4.1.2.2 When already on the scene of a hazardous materials/WMD incident, the awareness level personnel shall be able to perform the following tasks:

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(1) Analyze the incident to determine both the hazardous materials/WMD present and the basic hazard and response information for each hazardous material/WMD agent by completing the following tasks:

(a) Detect the presence of hazardous materials/WMD.

Test each of the elements in this section by referring to the illustration or photo indicated on the Web. Go to the FSTS Home Page, from the menu go to Academies, Hazmat Testing Page. Indicate by placing a check in the appropriate space if hazardous materials are likely present at the scene. For each yes checked, in the space provided, list what clues make you think hazardous materials might be involved.

Scene 1 Yes ___ No ___

Clues:

Scene 2 Yes ___ No ___

Clues:

Scene 3 Yes ___ No ___

Clues:

Signed _____ Date: ____/____/____

Scene 4 Yes ___ No ___

Clues:

Signed _____ Date: ____/____/____

(b) Survey a hazardous materials/WMD incident from a safe location to identify the name, UN/NA identification number, type of placard, or other distinctive marking applied for the hazardous materials/WMD involved. **(Refer to the photo indicated and list all the information which is available.)**

Scene 5 Report of a leak from a tank truck

Name	UN/NA #	Placard Type
------	---------	--------------

Scene 6 This truck has just spilled its contents along a city street

Name	UN/NA #	Placard Type
------	---------	--------------

Scene 7 A stake bed truck has crashed and spilled several of these containers which are damaged and leaking.

Name	UN/NA #	Placard Type
------	---------	--------------

Signed _____ Date: ____/____/____

(c) Collect hazard information from the current edition of the DOT *Emergency Response Guidebook* to determine:

Scene 8 Which is the proper guide page? ____ For a large spill, how far should you first isolate in all direction? _____

Scene 9 Which is the proper guide for the Hazardous Material involved in this fire incident? _____ If the material in this tank car is involved in a fire, what is the recommended isolation distance in all directions? _____

Scene 10 This barrel is leaking liquid. What is indicated by the “P” after the Guide Number?

Signed _____ Date: ____/____/____

(2) Implement actions consistent with the authority having jurisdiction (AHJ) and the current edition of the DOT *Emergency Response Guidebook* by completing the following tasks: (for Scene 9)
(a) Initiate protective actions

Signed _____ Date: ____/____/____

(b) Initiate the notification process

Signed _____ Date: ____/____/____

4.2.1 Detecting the Presence of Hazardous Materials

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(1)* Identify the definitions of both hazardous materials and WMD. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

The candidate has written out the definition of both hazardous materials/WMD above.

Signed _____ Date: ____/____/____

(2) – (3) Identify the UN/DOT hazard classes and divisions of hazardous materials/WMD and identify common examples of materials in each hazard class or division, and identify the primary hazards associated with each UN/DOT hazard class and division.

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Class 1 _____

Division 1.1 _____ Example _____
Primary hazard _____

Division 1.2 _____ Example _____
Primary hazard _____

Division 1.3 _____ Example _____
Primary hazard _____

Division 1.4 _____ Example _____
Primary hazard _____

Division 1.5 _____ Example _____
Primary hazard _____

Division 1.6 _____ Example _____
Primary hazard _____

Class 2 _____

Division 2.1 _____ Example _____
Primary hazard _____

Division 2.2 _____ Example _____
Primary hazard _____

Division 2.3 _____ Example _____
Primary hazard _____

Class 3 _____ Example _____

Primary hazard _____

Class 4 _____ Example _____

Division 4.1 _____

Primary hazard _____

Division 4.2 _____ Example _____

Primary hazard _____

Division 4.3 _____ Example _____

Primary hazard _____

Class 5 _____ Example _____

Division 5.1 _____

Primary hazard _____

Division 5.2 _____ Example _____

Primary hazard _____

Class 6 _____ Example _____

Division 6.1 _____

Primary hazard _____

Division 6.2 _____ Example _____

Primary hazard _____

Class 7 _____ Example _____

Primary hazard _____

Class 8 _____ Example _____

Primary hazard _____

Class 9 _____ Example _____

Primary hazard _____

ORM-D _____ Example _____

Primary hazard _____

Signed _____ Date: ____/____/____

(4) Identify the difference between hazardous materials/WMD incidents and other emergencies.
(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(5) Identify typical occupancies and locations in the community where hazardous materials/WMD are manufactured, transported, stored, used, or disposed of. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(6) Identify typical container shapes that can indicate the presence of hazardous materials/WMD. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(7) Identify facility and transportation markings and colors that indicate hazardous materials/WMD, including the following: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(a) Transportation markings, including UN/NA identification number marks, marine pollutant mark, elevated temperature (HOT) mark, commodity marking, and inhalation hazard mark (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

The candidate has toured jurisdiction and identified the below listed markings at the location indicated:

Facility markings & colors & location

Transportation markings & colors & where observed

Signed _____ Date: ____/____/____

(b) NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*, markings (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Draw the 704 Marking system and indicate the appropriate color of each diamond and the meaning of the color, symbol and number in same.

Signed _____ Date: ____/____/____

(c)*Military hazardous materials/WMD markings
(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

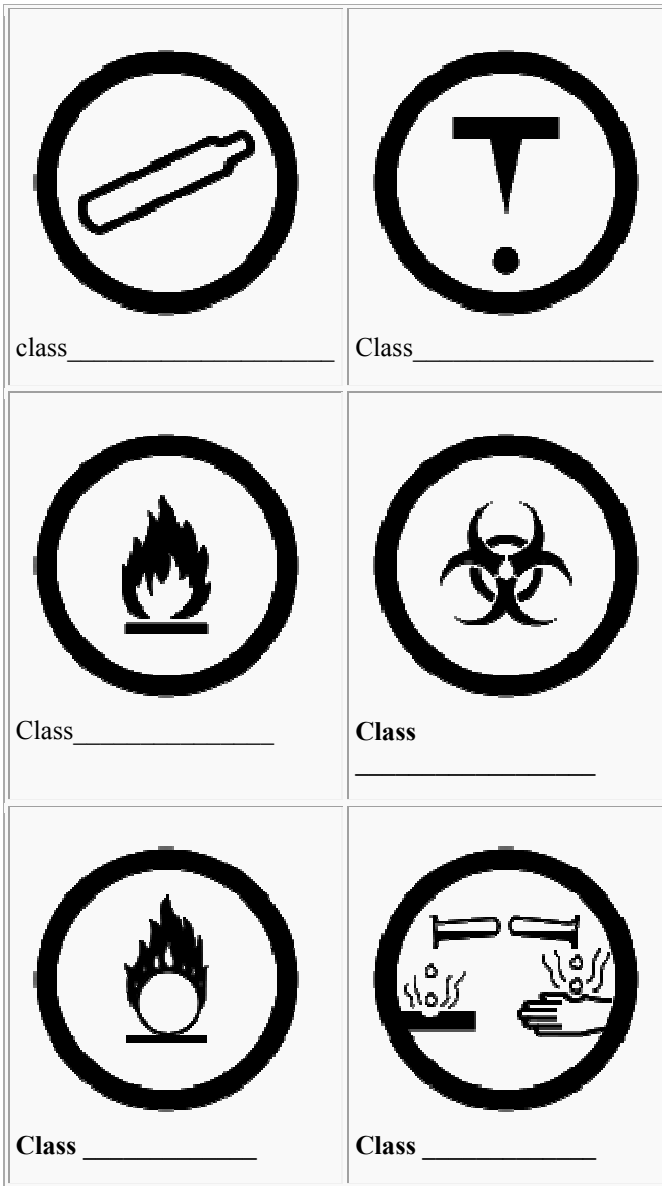
Give 5 example of military hazardous material markings

Signed _____ Date: ____/____/____

(d) Special hazard communication markings for each hazard class
(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Identify the Hazard Class of each symbol below

hazard symbols



Signed _____ Date: ____/____/____

(e) Pipeline markings (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

The candidate has toured jurisdiction and identified the below listed markings for pipelines

Signed _____ Date: ____/____/____

(f) Container markings

The candidate has toured the jurisdiction and identified the markings listed below: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Identify marking found in local jurisdiction that indicate presence of hazardous material

Signed _____ Date: ____/____/____

(8) Given an NFPA704 marking, describe the significance of the colors, numbers, and special symbols.

Signed _____ Date: ____/____/____

(9) Identify U.S. and Canadian placards and labels that indicate hazardous materials/WMD. The candidate has toured the jurisdiction and identified the markings listed below.

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Facility markings & colors

Transportation markings & colors

Signed _____ Date: ____/____/____

(10) Identify the following basic information on material safety data sheets (MSDS) and shipping papers that indicates hazardous materials/WMD: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(a) Identify where to find MSDS. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(b) Identify major sections of an MSDS. **(Refer to the MSDS download in the Testing section of the FSTS Home Page.)** List the name of the material and its flammable limits. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(c) Identify the entries on shipping papers that indicate the presence of hazardous materials. **(Refer to the "Train 1" download in the Testing section of the FSTS Home Page.)** List all the hazardous materials being carried on this train. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(d) Match the name of the shipping papers found in transportation (air, highway, rail, and water) with the mode of transportation. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Truck _____

Train _____

Aircraft _____

Ship _____

Signed _____ Date: ____/____/____

(e) Identify the person responsible for having the shipping papers in each mode of transportation. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Truck _____

Train _____

Aircraft _____

Ship _____

Signed _____ Date: ____/____/____

(f) Identify where the shipping papers are found in each mode of transportation. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Truck _____

Train _____

Aircraft _____

Ship _____

Signed _____ Date: ____/____/____

(g) Identify where the papers can be found in an emergency in each mode of transportation. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Truck _____

Train _____

Aircraft _____

Ship _____

Signed _____ Date: ____/____/____

(11)* Identify examples of clues (other than occupancy/ location, container shape, markings/color, placards/ labels, MSDS, and shipping papers) the sight, sound, and odor of which indicate hazardous materials/WMD. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(12) Describe the limitations of using the senses in determining the presence or absence of hazardous materials/WMD. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(13)* Identify at least four types of locations that could become targets for criminal or terrorist activity using hazardous materials/WMD. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(14)* Describe the difference between a chemical and a biological incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(15)* Identify at least four indicators of possible criminal or terrorist activity involving chemical agents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(16)* Identify at least four indicators of possible criminal or terrorist activity involving biological agents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(17)* Identify at least four indicators of possible criminal or terrorist activity involving radiological agents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(18)* Identify at least four indicators of possible criminal or terrorist activity involving illicit laboratories (clandestine laboratories, weapons lab, ricin lab). (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(19)* Identify at least four indicators of possible criminal or terrorist activity involving explosives. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(20)* Identify at least four indicators of secondary devices. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

4.2.2 Surveying the Hazardous Materials/WMD Incidents

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(1) Identify difficulties encountered in determining the specific names of hazardous materials/WMD at facilities and in transportation. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(2) Identify sources for obtaining the names of, UN/NA identification numbers for, or types of placard associated with hazardous materials/WMD in transportation. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(3) Identify sources for obtaining the names of hazardous materials/WMD in a facility. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

4.2.3 Collecting Hazard Information

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(1)* Identify the three methods for determining the guidebook page for a hazardous material/WMD. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(2) Identify the two general types of hazards found on each guide page. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

4.4.1 Initiating Protective Actions

(1) Identify the location of both the emergency response plan and/or standard operating procedures. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(2) Identify the role of the awareness level personnel during hazardous materials/WMD incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(3) Identify the following basic precautions to be taken to protect themselves and others in a hazardous materials/WMD incident:

(a) Identify the precautions necessary when providing emergency medical care to victims of hazardous materials/WMD incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(b) Identify typical ignition sources found at the scenes of hazardous materials/WMD incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(c)* Identify the ways hazardous materials/WMD are harmful to people, the environment, and property. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(d)* Identify the general routes of entry for human exposure to hazardous materials/WMD. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(4)* Given examples of hazardous materials/WMD and the identity of each hazardous material/WMD (name, UN/NA identification number, or type placard), identify the following response information: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(a) Emergency action (fire, spill, or leak and first aid (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30), Emergency Response Guidebook.

(Refer to the FSTS Home Page again, click Academies, Hazmat Testing Page. Refer to Scene 11. The vehicle is placarded with Scene 11a.)

Fire _____

Broken package leakage

First aid

For UN # 1045 (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(b) Personal protective equipment necessary

For "Chlorine" (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(c) Initial isolation and protective action distances

Signed _____ Date: ____/____/____

(5) Given the name of a hazardous material, identify the recommended personal protective equipment from the following list:

(a) Street clothing and work uniforms (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(b) Structural fire-fighting protective clothing (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(c) Positive pressure self-contained breathing apparatus (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(d) Chemical-protective clothing and equipment (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Indicate the letter of the proper personal protective clothing for each of the following:

Gasoline _____ Propane _____

Anhydrous Ammonia _____ Nitric Acid _____

Signed _____ Date: ____/____/____

(6) Identify the definitions for each of the following protective actions: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(a) Isolation of the hazard area and denial of entry (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(b) **Evacuation** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(c)* **Sheltering in-place** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(7) **Identify the size and shape of recommended initial isolation and protective action zones. Draw an illustration below and label.** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(8) **Describe the difference between small and large spills as found in the table of initial isolation and protective action distances in the DOT Emergency Response Guidebook.** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(9) **Identify the circumstances under which the following distances are used at hazardous materials/WMD incidents:** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

(a) **Table of initial isolation and protective action distances.** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(b) Isolation distances in the numbered guides. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

10. Describe the difference between the isolation distances on the orange-bordered guidebook pages and the protective action distances on the green-bordered ERG (*Emergency Response Guidebook*) pages. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(11) Identify the techniques used to isolate the hazard area and deny entry to unauthorized persons at hazardous materials/WMD incidents: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

Signed _____ Date: ____/____/____

(12)* Identify at least four specific actions necessary when an incident is suspected to involve criminal or terrorist activity. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

- A.) _____
- B.) _____
- C.) _____
- D.) _____

Signed _____ Date: ____/____/____

4.4.2 Initiating the Notification Process.

Given scenarios involving hazardous materials/WMD incidents, awareness level personnel shall identify the initial notifications to be made and how to make them, consistent with the emergency response plan and/or standard operating procedures. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 28-30)

List the initial notifications to be made and how to make them:

Signed _____ Date: ____/____/____

Hazardous Materials Operations

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Website: <http://www.montana.edu/wwwfire/hazmattest.html>

5.2 Core Competencies – Analyzing the Incident

5.2.1 Surveying Hazardous Materials/WMD Incidents. Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall collect information about the incident to identify the containers, the materials involved, the surrounding conditions, and whether hazardous materials/WMD have been released, by completing the requirements of 5.2.1.1 through 5.2.1.6.

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

{Use pictures under 5.2 Competencies on FSTS website. Match letter identified with picture to standard.}

5.2.1.1 Given three examples each of liquid, gas, and solid hazardous material or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

- 1) Gas: _____
- 2) Liquid: _____
- 3) Solid: _____

Signed _____ Date: ____/____/____

5.2.1.1.1 Given examples of the following tank cars, the operations level responder shall identify each tank car by type, as follows: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

{Use pictures under 5.2 Competencies on FSTS website. Match letter identified with picture to standard.}

(1) Cryogenic liquid tank cars (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) Nonpressure tank cars (general service or low pressure cars) (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(3) Pressure tank cars (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.1.2 Given examples of the following intermodal tanks, the operations level responder shall identify each intermodal tank by type, as follows: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) **{Use pictures under 5.2 Competencies on FSTS website. Match letter identified with picture to standard.}**

(1) Nonpressure intermodal tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) Pressure intermodal tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(3) Specialized intermodal tanks, including the following: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(a) Cryogenic intermodal tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(b) Tube modules (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.1.3 Given examples of the following cargo tanks, the operations level responder shall identify each cargo tank by type, as follows: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) **{Use pictures under 5.2 Competencies on FSTS website. Match letter identified with picture to standard.}**

(1) Compressed gas tube trailers (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) Corrosive liquid tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(3) Cryogenic liquid tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(4) Dry bulk cargo tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(5) High pressure tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(6) Low pressure chemical tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(7) Nonpressure liquid tanks (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.1.4 Given examples of the following storage tanks, the operations level responder shall identify each tank by type, as follows: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) **{Use pictures under 5.2 Competencies on FSTS website. Match letter identified with picture to standard.}**

(1) Cryogenic liquid tank: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) Nonpressure tank: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(3) **Pressure tank:** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.1.5 Given examples of the following nonbulk packaging, the operations level responder shall identify each package by type, as follows: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) **{Use pictures under 5.2 Competencies on FSTS website. Match letter identified with picture to standard.}**

(1) **Bags** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) **Carboys** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(3) **Cylinders** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(4) **Drums** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(5) **Dewar flask** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.1.6 Given examples of the following packaging, the operations level responder shall identify the characteristics of each container or package by type as follows. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1) **Intermediate bulk container (IBC).** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) **Ton container.** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.1.7* Given examples of the following radioactive material packages, the operations level responder shall identify the characteristics of each container or package by type, as follows:

(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1) **Excepted** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) **Industrial** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(3) **Type A** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(4) **Type B** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(5) **Type C** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.2 Given examples of containers, the operations level responder shall identify the markings that differentiate one container from another. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.2.1 Given examples of the following marked transport vehicles and their corresponding shipping papers, the operations level responder shall identify the following vehicle or tank identification marking: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) **{Use pictures under 5.2 Competencies on FSTS website. Match letter identified with picture to standard.}**

(1) Highway transport vehicles, including cargo tanks

(2) Intermodal equipment, including tank containers

(3) Rail transport vehicles, including tank cars

Signed _____ Date: ____/____/____

5.2.1.2.2 Given examples of facility containers, the operations level responder shall identify the markings indicating container size, product contained, and/or site identification numbers. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) **{Use pictures on FSTS website assigned to 5.2.1.2.2 standard.} Using the example on the FSTS web site:**

List the products present:

Are there any visible markings to: ID location? YES NO

Container size? YES NO

Signed _____ Date: ____/____/____

5.2.1.3.1 The operations level responder shall identify the following information on a pipeline marker: .} **Using the example on the FSTS web site:**

(1) Emergency telephone number

(2) Owner

(3) Product

Signed _____ Date: ____ / ____ / ____

5.2.1.3.2 Given a pesticide label, the operations level responder shall identify each of the following pieces of information, then match the piece of information to its significance in surveying hazardous materials incidents: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33){**Use pesticide form on FSTS website.**}

(1) **Active ingredient** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) **Hazard statement** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(3) **Name of pesticide** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(4) **Pest control product EPA or (PCP) number (in Canada)** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(5) **Precautionary statement** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(6) **Signal word** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.3.3 Given a label for a radioactive material, the operations level responder shall identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) **{Refer to Label on FSTS website.}**

Signed _____ Date: ____/____/____

5.2.1.4* The operations level responder shall identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.5 The operations level responder shall describe ways to verify information obtained from the survey of a hazardous materials/WMD incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.1.6* The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.2 Collecting Hazard and Response Information. Given scenarios involving known hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shippers and manufacturers by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1) Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

- | | | | |
|--------------|-------|----|--|
| Class 1 | _____ | a. | radioactive materials |
| Division 1.1 | _____ | b. | toxic and infectious substances |
| Division 1.2 | _____ | c. | oxidizing substances and organic peroxides |

Division 1.3	_____	d.	flammable solids; spontaneously combustible materials; and dangerous when wet
Division 1.4	_____	e.	flammable liquids
Division 1.5	_____	f.	gases
Division 1.6	_____	g.	explosives
Class 2	_____	h.	corrosive substances
Division 2.1	_____	i.	miscellaneous
Division 2.2	_____	j.	infectious substances
Division 2.3	_____	k.	toxic substances
Class 3	_____	l.	mass explosion hazard
		m.	projection hazard
Class 4	_____	n.	flammable gases
Division 4.1	_____	o.	non-flammable, non-toxic gas
Division 4.2	_____	p.	toxic gases
Division 4.3	_____	q.	oxidizing substances
		r.	organic peroxides
Class 5	_____	s.	explosives with predominately fire hazard
Division 5.1	_____	t.	no significant blast hazard
Division 5.2	_____	u.	very insensitive explosives with mass explosion hazard
		v.	extremely insensitive articles
Class 6	_____	w.	flammable solids
Division 6.1	_____	x.	spontaneously combustible materials
Division 6.2	_____	y.	water reactive substances
Class 7	_____		
Class 8	_____		
Class 9	_____		

(2) Identify two ways to obtain an MSDS in an emergency. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(3) Using an MSDS for a specified material, identify the following hazard and response information: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) **{Choose any MSDS on FSTS website.}**

(a) Physical and chemical characteristics (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(b) Physical hazards of the material (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(c) **Health hazards of the material** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(d) **Signs and symptoms of exposure** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(e) **Routes of entry** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(f) **Permissible exposure limits** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(g) **Responsible party contact** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(h) **Precautions for safe handling (including hygiene practices, protective measures, and procedures for cleanup of spills and leaks)** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(i) **Applicable control measures, including personal protective equipment** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(j) **Emergency and first-aid procedures** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(4) Identify the following: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(a) Type of assistance provided by CHEMTREC/CANUTEC/SETIQ and governmental authorities (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(b) Procedure for contacting CHEMTREC/CANUTEC/SETIQ and governmental authorities (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(c) Information to be furnished to CHEMTREC/CANUTEC/SETIQ and governmental authorities (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(5) Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(6) Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(7) Identify the procedure for contacting local, state, and federal authorities as specified in the emergency response plan and/or standard operating procedures. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(8) *Describe the properties and characteristics of the following: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(a) Alpha radiation (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(b) Beta radiation (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(c) Gamma radiation (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(d) Neutron radiation (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.2.3* Predicting the Likely Behavior of a Material and Its Container. Given scenarios involving hazardous materials/ WMD incidents, each with a single hazardous material/WMD, the operations level responder shall describe the likely behavior of the material or agent and its container by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1) Interpret the hazard and response information obtained from the current edition of the DOT *Emergency Response Guidebook*, MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper and manufacturer contacts, as follows:

(a) Match the following chemical and physical properties with their significance and impact on the behavior of the container and its contents: **(See Scenario Descriptions on FSTS Website)**

After researching the product with resources provided provide a short description of possible events and list the physical and chemical properties of the product listed below that would significantly impact the behavior of the product

iii. **Exposure and hazard** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

iv. **Infectious and contagious** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

v. **Acute effects and chronic effects** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

vi. **Acute exposures and chronic exposures** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(2)*Identify three types of stress that can cause a container system to release its contents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(3)*Identify five ways in which containers can breach. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(4)*Identify four ways in which containers can release their contents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(5)*Identify at least four dispersion patterns that can be created upon release of a hazardous material. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(6)*Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(7)*Identify the health and physical hazards that could cause harm. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(8)*Identify the health hazards associated with the following terms:

(a) Alpha, beta, gamma and neutron radiation (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(b) Asphyxiant (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(c)*Carcinogen (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(d) Convulsant (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(e) **Corrosive** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(f) **Highly toxic** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(g) **Irritant** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(h) **Sensitizer, allergen** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(i) **Target organ effects** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(j) **Toxic** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(9)*Given the following, identify the corresponding UN/DOT hazard class and division:

(a) **Blood agents** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(b) **Biological agents and biological toxins** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(c) **Choking agents** (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(d) Irritants (riot control agents) (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(e) Nerve agents (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(f) Radiological materials (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(g) Vesicants (blister agents) (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____ / ____ / ____

5.2.4 Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the potential harm within the endangered area at each incident by completing the following requirements:

(1) Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident; describe the number types of exposure within that endangered area. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33) (**NOTE: refer to table of isolation distances in ERG**)

Exercise: You respond to a MC-331 vessel that is overturned and is leaking on an interstate. Placard on the tank lists Un number 1005. Time of day is 1:00 pm on July 7. Clear, sunny day expected. Temperature will be 85 degrees. Winds will be 5-10 mph and coming from the southwest.

(3) Identify resources available for determining the concentrations of a released hazardous materials/WMD within an endangered area (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(4) Given the concentrations of the released material, describe the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(5) Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

5.3 Core Competencies - Planning the Response.

5.3.1 Describing Response Objectives. Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Scenario #1 At 08:00 you are dispatched to a strong odor from the city water treatment plant. Upon arriving on scene you are contacted by the facility manager. He states that they were receiving their monthly load of chlorine when they encountered a leaky fitting. You notice a strong smell of chlorine and visually see a milky cloud inside the warehouse. The plant is border by a river and undeveloped land to the SW and a commercial/retail area adjacent to the North and East.

List resources that would be available for initial response in your jurisdiction

(1) Describe the number of exposures that could be saved with the resources provided by the authority having jurisdiction. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(2) Describe the steps for determining response objectives. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

List your response objectives:

Signed _____ Date: ____ / ____ / ____

(3) Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(4) Assess the potential for secondary attacks and devices at criminal or terrorist events.

Signed _____ Date: ____ / ____ / ____

Scenario 2:

A truck transporting flammable liquids has rolled on a two lane highway in a rural area. The container has breached and is actively burning. The driver is not visible and the nearest exposure is a farm house 300 feet down wind. There are no other visible exposures. The nearest water supply is a 5 acre farm pond a half mile away.

List resources that would be available for initial response in your jurisdiction

(1) Describe the number of exposures that could be saved with the resources provided by the authority having jurisdiction. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____ / ____ / ____

(2) Describe the steps for determining response objectives. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

List your response objectives:

Signed _____ Date: ____ / ____ / ____

(3) Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

What is the hazard in the scenario?

Signed _____ Date: ____/____/____

(4) Assess the potential for secondary attacks and devices at criminal or terrorist events.

Signed _____ Date: ____/____/____

5.3.2 Identifying Action Options.

(1) Using the scenarios from 5.3.1, identify the options to accomplish the identified response objectives. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Scenario 1

Scenario 2

(2) Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure and contamination concerns.

Signed: _____ Date: ____/____/____

5.3.3 Determining Suitability of Personal Protective Equipment

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned Tasks by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

The hazardous material for this standard is Hydrochloric Acid.

(1) Identify the respiratory protection required for a given response option and the following: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(a) Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

i. Positive pressure self-contained breathing apparatus (SCBA)

ii. Positive pressure air-line respirator with required escape unit

iii. Closed-circuit SCBA

iv. Powered air-purifying respirator (PAPR)

v. Air-purifying respirator (APR)

vi. Particulate respirator

Signed: _____ Date: ___/___/___

(b) Identify the required physical capabilities and limitations of personnel working in respiratory protection. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(2) Identify the personal protective clothing required for a given option and the following: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(a) Identify skin contact hazards encountered at HazMat/WMD incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(b) Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(i) Chemical-protective clothing: liquid splash-protective clothing and vapor-protective clothing

(ii) High temperature-protective clothing: proximity suit and entry suits

(iii) Structural fire-fighting protective clothing

Signed _____ Date ____ / ____ / ____

5.3.4* Identifying Decontamination Issues. Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Considering the scenarios on the FSTS website, which one would most likely require emergency decon and why?

(1) Identify ways that people, personal protective equipment, apparatus, tools, and equipment become contaminated. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(2) Describe how the potential for secondary contamination determines the need for decontamination. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(3) Explain the importance and limitations of decontamination procedures at hazardous materials incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(4) Identify the purpose of emergency decontamination procedures at hazardous materials incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(5) Identify the methods, advantages, and limitations of emergency decontamination procedures. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.4 Core Competencies - Implementing the Planned Response.

5.4.1 Establishing Scene Control.

Given scenarios involving hazardous materials/WMD incidents, the first responder at the operational level shall explain how to establish and maintain scene control, including control zones and emergency decontamination, and communications between responders and to the public by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

- (1) Identify the procedures for establishing scene control through control zones.

Demonstrated in FF1 tactic

- (2) Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

Demonstrated in FF1 tactic

- (3) Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

(a) Evacuation _____

(b) Sheltering in-place protection _____

- (4) Demonstrate the ability to perform emergency decontamination

Demonstrated within FF 1 tactics

Signed _____

- (5)* Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

- (a) Hazardous materials incident

- (b)* Hazardous materials incident involving criminal or terrorist activities

- (6) Identify procedures for ensuring coordinated communication between responders and the public.

Signed _____ Date ____/____/____

5.4.2* Preserving Evidence. Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

List general procedures to follow for preserving evidence

1. _____
2. _____
3. _____

Signed _____ Date: ____/____/____

5.4.3* Initiating the Incident Command System. Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall implement the incident command system as required by the AHJ by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Demonstrated: ICS will be established at all tactics performed

(1) Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(2) Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(3) Identify the purpose, need, benefits, and elements of the incident command system for hazardous materials/WMD incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(4) Identify the duties and responsibilities of the following functions within the incident management system:

(a) Incident safety officer (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(b) Hazardous materials branch or group (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(5) Identify the considerations for determining the location of the incident command post for a hazardous materials/WMD incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(6) Identify the procedures for requesting additional resources at a hazardous materials/WMD incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Demonstrated FF1 tactic

Signed _____ Date: ____/____/____

(7) Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

5.4.4 Using Personal Protective Equipment. Given personal protective equipment provided by the AHJ, the operations level responder shall describe considerations for the use of personal protective equipment provided by the authority having jurisdiction by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1) Identify the importance of the buddy system. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(2) Identify the importance of the backup personnel. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(3) Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)
Demonstrated FF1 tactic

Signed _____ Date: ____/____/____

(4) Identify the signs and symptoms of heat and cold stress and procedures for their control. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(5) Identify the capabilities and limitations of personnel working in the personal protective equipment provided by the AHJ.

Signed _____ Date: ____/____/____

(6) Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the authority having jurisdiction. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)
Demonstrated FF1 tactic

Signed _____ Date: ____/____/____

(7) Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the authority having jurisdiction according to the manufacturer's specifications and recommendations. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Demonstrated FF1 tactic

Signed _____ Date: ____/____/____

5.5 Core Competencies - Evaluating Progress.

5.5.1 Evaluating the Status of Planned Response. Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall determine the effectiveness of the actions taken in accomplishing the response objectives and shall meet the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Use scenarios 7 and 8 on FSTS website to answer the following questions.

(1) Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Scenario 7

Identify the following:

Primary Hazard (statement of problem)

Response Objectives

Actions

Did the actions meet the response objectives? _____

Scenario 8

Identify the following:

Primary Hazard (statement of problem)

Response Objectives

Actions

Did the actions meet the response objectives? _____

Signed _____ Date: ____ / ____ / ____

(2) Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____ / ____ / ____

5.5.2 Communicating the Status of the Planned Response. Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall report the status of the planned response through the normal chain of command by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1) Identify the methods for communicating the status of the planned response through the normal chain of command. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Demonstrated FF1 tactic

Signed _____ Date: ____/____/____

(2) Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Demonstrated FF1 tactic

Signed _____ Date: ____/____/____

6.2.3.1 Selecting Personal Protective Equipment. Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD and the personal protective equipment provided by the AHJ, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based on local procedures by completing the following requirements: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1)*Describe the types of protective clothing and equipment that are available for response based on NFPA standards and how these items relate to EPA levels of protection.

Signed _____ Date: ____/____/____

(2) Describe personal protective equipment options for the following hazards:

(a) Thermal

Signed _____ Date: ____/____/____

(b) Radiological

Signed _____ Date: ____/____/____

(c) Asphyxiating

Signed _____ Date: ____/____/____

(d) Chemical

Signed _____ Date: ____/____/____

(e) Etiological/biological

Signed _____ Date: ____/____/____

(f) Mechanical

Signed _____ Date: ____/____/____

(3) Select personal protective equipment for mission-specific tasks at hazardous materials/WMD incidents based on local procedures.

(a) Describe the following terms and explain their impact and significance on the selection of chemical protective clothing:

i. Degradation

ii. Penetration

iii. Permeation

(b) Identify at least three indications of material degradation of chemical-protective clothing.

(c) Identify the different designs of vapor-protective and splash-protective clothing and describe the advantages and disadvantages of each type.

(d)*Identify the relative advantages and disadvantages of the following heat exchange units used for the cooling of personnel operating in personal protective equipment:

i. Air cooled

ii. Ice cooled

iii. Water cooled

iv. Phase change cooling technology

Signed _____ Date: ____/____/____

(e) Identify the physiological and psychological stresses that can affect users of personal protective equipment.

Signed _____ Date: ____/____/____

(f) Describe local procedures for going through the technical decontamination process.

Signed _____ Date: ____/____/____

6.2.4 Core Competencies — Implementing the Planned Response.

6.2.4.1 Using Protective Clothing and Respiratory Protection. Given the personal protective equipment provided by the authority having jurisdiction, the operations level responder assigned to use personal protective equipment shall demonstrate the ability to don, work in, and doff the equipment provided to support mission specific tasks by completing the following requirements:

(1) Describe at least three safety procedures for personnel wearing protective clothing. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(2) Describe at least three emergency procedures for personnel wearing protective clothing. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

6.2.5.1 Reporting and Documenting the Incident. Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to use personal protective equipment shall document use of the personal protective equipment by completing the documentation requirements of the emergency response plan or standard operating procedures regarding personal protective equipment.

(1) Complete the documentation requirements of the emergency response plan or standard operating procedures regarding personal protective equipment. (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

6.6 Mission-Specific Competencies: Product Control.

6.6.1.2.2 When responding to hazardous materials/WMD incidents, the operations level responder assigned to perform product control shall be able to perform the following tasks: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1) Plan an initial response within the capabilities and competencies of available personnel, personal protective equipment, and control equipment and in accordance with the emergency response plan or standard operating procedures by completing the following tasks:

(a) Describe the control options available to the operations level responder.: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(b) Describe the control options available for flammable liquid and flammable gas incidents. :
(Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

Signed _____ Date: ____/____/____

(2) Implement the planned response to a hazardous materials/WMD incident.

Signed _____ Date: ____/____/____

6.6.3 Planning the Response.

(2) Identify the purpose for and the procedures, equipment, and safety precautions associated with each of the following control techniques: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(a) Absorption:

(b) Adsorption:

(c) Damming

(d) Diking

(e) Dilution

(f) Diversion

(g) Remote valve shutoff

(h) Retention

(i) Vapor dispersion

(j) Vapor suppression

Signed _____ Date: ____/____/____

6.6.4 Implementing the Planned Response.

6.6.4.1 Performing Control Options. Given an incident action plan for a hazardous materials/WMD incident, within the capabilities and equipment provided by the authority having jurisdiction, the operations level responder assigned to perform product control shall demonstrate control functions set out in the plan by completing the following requirements as prescribed by the authority having jurisdiction: (Resource: 6th Ed. IFSTA ESSENTIALS of FF and FD Ops., Chapters 23 and 24; NFPA/IAFC FUNDAMENTALS OF FIRE FIGHTER SKILLS, 3rd Ed., Chapters 27-33)

(1) Demonstrate application of foam on spill

Signed _____ Date: _____

(2) Identify the characteristics and applicability of the following Class B foams if supplied by the authority having jurisdiction:

(a) Aqueous film-forming foam (AFFF)

(b) Alcohol-resistant concentrates

(c) Fluoroprotein

(d) High-expansion foam

3. Given the required tools and equipment, demonstrate how to perform the following control activities:

- (a) Absorption
- (b) Adsorption
- (c) Damming
- (d) Diking
- (e) Dilution
- (f) Diversion
- (g) Remote valve shutoff
- (h) Retention
- (i) Vapor dispersion
- (j) Vapor suppression

Signed _____ Date: ____/____/____

(4) Identify the location and describe the use of emergency remote shutoff devices on MC/DOT-306/406, MC/DOT-307/407, and MC-331 cargo tanks containing flammable liquids or gases.

Signed _____ Date: ____/____/____

(5) Describe the use of emergency remote shutoff devices at fixed facilities.

Signed _____ Date: ____/____/____

6.6.4.2 The operations level responder assigned to perform product control shall describe local procedures for going through the technical decontamination process.

Signed _____ Date: ____/____/____

PROCTOR'S AFFIDAVIT

Note: This form may be duplicated so each proctor has one to file.

Date: _____

Proctor's Name _____

By my signature, I hereby agree to administer testing for Montana State University - Fire Services Training School in a professional manner, with integrity, and in compliance with the letter and spirit of the regulations governing the operation of the Montana Professional Qualifications Certification System. I also certify that I have not been involved in the training of the candidate(s) for the skills which I am testing. I understand that any breach of this commitment will result in my immediate dismissal and possible legal action against me.

Proctor's Signature

Witness

***** PROCTOR IN-SERVICE TRAINING *****

Location of Training: _____

Lead Instructor: _____

Date of Training: ____ / ____ / ____

FSTS Tested Portion - Fire Fighter I Tactics

This page provides documentation for completion of the tactics required for Fire Fighter 1 certification. **Each Tactic must be signed off by a representative of the FSTS.** Other signatures will not be accepted on this page. Bring this Booklet with you when testing and be sure to have the appropriate sections completed by the evaluators **before** they leave the test site.

Exterior Fire Tactic as Fire Fighter A

Evaluator _____ Date _____

Exterior Fire Tactic as Fire Fighter B

Evaluator _____ Date _____

Offensive Fire Attack as Fire Fighter A

Evaluator _____ Date _____

Offensive Fire Attack as Fire Fighter B

Evaluator _____ Date _____

Primary Search 2 Tactic as Fire Fighter A

Evaluator _____ Date _____

Primary Search 2 Tactic as Fire Fighter B

Evaluator _____ Date _____

Flat Roof Vent as Fire Fighter A

Evaluator _____ Date _____

Flat Roof Vent as Fire Fighter B

Evaluator _____ Date _____

Pitched Roof Vent as Fire Fighter A

Evaluator _____ Date _____

Pitched Roof Vent as Fire Fighter B

Evaluator _____ Date _____

Hot Zone Determination Fire Fighter A

Evaluator _____ Date _____

Hot Zone Determination Fire Fighter B

Evaluator _____ Date _____

Hot Zone Determination Fire Fighter C

Evaluator _____ Date _____

Decontamination Fire Fighter A

Evaluator _____ Date _____

Decontamination Fire Fighter B

Evaluator _____ Date _____

Decontamination Fire Fighter C

Evaluator _____ Date _____

Bypass Breathing

- Candidate has demonstrated the ability to activate bypass system to breathe in an emergency, using only 1 hand to access and activate the valve and with obscured vision. Candidate must perform skill laying on their front and back, for 30 seconds each side

Evaluator _____ Date _____

PASS Activation

- Candidate has demonstrated the ability to activate PASS device, using only 1 hand to access and activate it and with obscured vision. Candidate must do so lying on their front and back, and demonstrate both activating and deactivating the device.

Evaluator _____ Date _____

Mayday Radio Traffic

- Candidate must demonstrate the ability to transmit mayday radio traffic in an emergency given a portable radio in full PPE and SCBA. Candidate must include who, what happened, where, and current air supply in the radio transmission. Candidate must demonstrate ability to cancel PASS alarm during the radio transmission. Candidate must utilize proper communication technique (closed loop). Candidate must perform skill lying on the floor with obscured vision.

Evaluator _____ Date _____

