Program of Instruction
Course Syllabus

Course Title:
Statewide WMD Response: Hazardous Materials Technician A

Course Duration: 45 hours

Program: Hazardous Materials Program

Level of Training: Performance – Offensive (OSHA Technician)

Associated Target Capabilities:
Information Gathering & Recognition of Indicators & Warnings
CBRNE Detection
Responder Safety & Health
Public Safety & Security Response
On-Site Incident Management
WMD/Hazardous Materials Response & Decontamination

Course Prerequisites:
Statewide WMD Response: Hazardous Materials Awareness
Statewide WMD Response: Hazardous Materials Operations

Recommended Prerequisites:
Technical Rescue Awareness

Course Description: The Statewide WMD Response: Hazardous Materials Technician 'A' course provides those who are or will be operating as a member of any of the Illinois Statewide WMD/Hazmat teams (fire department or law enforcement agency) the essential skills needed to evaluate and work defensively or offensively at an incident involving the release of hazardous materials. The objectives of the course are to teach participants: to classify, identify, and verify known and unknown material by using field survey instruments and equipment; to select and use the proper chemical protective equipment provided to the hazardous materials Technician; to understand hazard and risk assessment techniques for Hazmat and CBRNE environments; to be able to perform advanced control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available; and to develop action plans within the parameters of the State plan for statewide response to WMD events.

Course Content:

Module: 1
Title: Laws and Regulations

Terminal Learning Objective:
At the conclusion of this module, the student will *explain* the laws, regulations and standards that apply to hazardous materials/WMD incidents.

Module: 2
Title: Response Components

Terminal Learning Objective:
At the conclusion of this module, the student will *explain* the 5-step Isolate to Terminate process and how it affects the hazardous materials response.

Module: 3
Title: Chemical and Physical Properties

Terminal Learning Objective:
At the conclusion of this module, the student will *apply* chemical and physical properties of a material to predict how hazardous materials respond in different situations.

Module: 4
Title: Toxicology

Terminal Learning Objective:
At the conclusion of this module, the student will *explain* how hazardous materials enter the body and what their potential effects are.

Module: 5
Title: Collecting & Interpreting Hazard & Response Information

Terminal Learning Objective:
At the conclusion of this module, the student will *utilize* a minimum of three resources to collect and interpret information concerning a hazardous material.

Module: 6
Title: Personal Protective Equipment

Terminal Learning Objective:
At the conclusion of this module, the student will *demonstrate* the proper selection, use, and maintenance of all four EPA ensemble classifications.

Drill One – Suit Familiarization

Module: 7
Title: Recognition and Identification – Part I

Terminal Learning Objective:
At the conclusion of this module, the student will *recognize* different types of transportation containers and markings and *determine* the hazards associated with the materials transported or stored within the container.

Module: 8
Title: Recognition and Identification – Part II

Terminal Learning Objective:
At the conclusion of this module, the student will *identify* potential materials present at an incident, based on the type of pipeline or fixed facility container involved.

Module: 9
Title: Monitoring

Terminal Learning Objective:
At the conclusion of this module, the student will *demonstrate* the use of monitoring equipment available to the hazardous materials Technician.

Module: 10
Title: Container Behavior

Terminal Learning Objective:
At the conclusion of this module, the student will *identify* factors that determine how hazardous materials containers will behave during an incident and *develop* a strategy for a response based on the analysis of the container and it's behavior.

Drill Two – Skill Stations in Level A

Module: 11
Title: Control Functions

Terminal Learning Objective:
At the conclusion of this module, the student will *demonstrate* performing control functions, available to the Technician, in support of the Incident Action Plan.

Module: 12
Title: Site Safety Plan

Terminal Learning Objective:
At the conclusion of this module, the student will *demonstrate* the completion of a Site Safety Plan.

Module: 13
Title: Incident Management System

Terminal Learning Objective:
At the conclusion of this module, the student will *identify* the positions that make up the Incident Management System and how to use IMS, Unified Command and NIMS at a hazardous materials/WMD incident.

Drill Three – Tech Level Skills in Level A

Module: 14
Title: Decontamination

Terminal Learning Objective:
At the conclusion of this module, the student will *demonstrate* proper selection, set-up, operation, and tear down of a decontamination line.

Module: 15
Title: Terrorist & Other Criminal Activities

Terminal Learning Objective
At the conclusion of this module, the student will *classify* terrorist incidents into the five basic categories of Chemical, Biological, Radiological, Nuclear, and Explosive.

Module: 16
Title: Standard Operating Guidelines

Terminal Learning Objective:
At the conclusion of this module, the student will *summarize* key information that should be contained in Standard Operating Guidelines (SOG) for hazardous materials/WMD incidents.

Tabletop

Night Drill

Final Incident

Textbook:
Noll, Gregory, Michael Hildebrand and James Yvorra. *Hazardous Materials: Managing the Incident 3rd Ed.* IFSTA. Red Hat Publishing Co., 2005

Evaluation Strategy:
Written and practical skills testing are conducted at the end of the course. In addition, simulated evolutions involving various hazardous materials situations are conducted throughout the course.

References:

National Fire Protection Association Standard 472 *Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2008.

Noll, Gregory, Michael Hildebrand and James Yvorra. *Hazardous Materials: Managing the Incident 3rd Ed.* IFSTA. Red Hat Publishing Co., 2005

United States Department of Homeland Security. *National Incident Management System, 2004.* Washington D.C., 2004.

U.S. Department of Labor, *Code of Federal Regulations: Labor 29 CFR 1910.120*. Washington, D.C., Office of the Federal Register, National Archives and Records Administration, 1996.

U.S. Department of Labor, *Code of Federal Regulations: Transportation 49 CFR Parts 100 to 77*. Washington, D.C., Office of the Federal Register, National Archives and Records Administration, 1995.

Course Schedule

DAY ONE

Start Time: 0800

Event	Duration
Orientation and Introductions	15 minutes
Module 1: Laws and Regulations	30 minutes
Module 2: Response Components	45 minutes
Module 3: Chemical/Physical Properties	1 hour
Module 4: Toxicology	1 hour
Module 5: Collecting & Interpreting	1 hour
Lunch	
Module 6: Personal Protective Equipment	1 hour
Drill One: Suit Familiarization	2 hour and 30 min

Assignment: Reading Assignment One – Due Day Two 0800

DAY TWO

Start Time: 0800

Event	Duration
Review Homework	15 minutes
Module 7: Recognition and Identification – Part I	1 hour and 15 min
Module 8: Recognition and Identification – Part II	1 hour
Module 9: Monitoring	1 hour and 30 min
Lunch	
Module 10: Container Behavior	1 hour
Drill Two: Skill Stations in Level A	3 hours

Assignment: Reading Assignment Two – Due Day Three 0800

DAY THREE

Start Time: 0800

Event	Duration
Review Homework	15 minutes
Module 11: Control Functions	3 hours and 45 min
Lunch	
Module 12: Site Safety Plan	30 minutes
Module 13: Incident Management System	1 hour
Drill Three: Tech Level Skills in Level A	3 hours and 30 min

Assignment: Reading Assignment Three – Due Day Four 0800

DAY FOUR

Start Time: 0800

Event	Duration
Review Homework	15 minutes
Module 14: Decontamination	1 hour and 30 min
Science Activity	1 hour
Module 15: Terrorist and Other Criminal Activities	1 hour and 15 min
Lunch	
Module 16: Standard Operating Guidelines	1 hour
Table Top Exercise	2 hours
Dinner	
Night Drill	5 hours

DAY FIVE

Start Time: 0800

Event	Duration
Final Incident	4 hours
Lunch	
Review & CEQ's	1 hour
Test	3 hours