

State of Oregon
Department of Public Safety Standards and Training

**NFPA 472 Standard for Competence of Responders to
Hazardous Materials/Weapons of Mass Destruction
HAZARDOUS MATERIALS
INCIDENT COMMANDER
Task Book**

Task Book Assigned To:	
Name	DPSST Fire Service #
Agency Name	Date Initiated
Signature of Agency Head or Training Officer	Date Completed

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Additional copies of this document may be downloaded from the DPSST web site:
<http://oregon.gov/DPSST/FC/index.shtml>

NEW 1/2010

Task Book Qualification Record Books (Task Book) have been developed for various certification levels within the Oregon Department of Public Safety Standards and Training (DPSST) system. Each Task Book lists the job performance requirements (JPRs) for the specific certification level in a format that allows a candidate to be trained and evaluated during three (3) sequential sessions. Successful performance of all tasks, as observed and recorded by a qualified and approved evaluator will result in the candidate's eligibility for DPSST certification.

To become certified at a specific level, the applicant must successfully complete the job performance requirements in sequence. Before a job performance evaluation can be taken, all requisite knowledge and skills must be satisfied. In addition, all relative task book evaluations must be checked off by the evaluator. When all prescribed requirements have been met, an application for Certification will be forwarded to DPSST. All certificates are mailed to the Training Officer at his/her Fire Service Agency.

NOTE TO FIRE SERVICE AGENCIES: These JPRs serve as general guidelines. As such they are not intended to replace specific sequences of apparatus or equipment operation that may be outlined by manufacturer specifications. At all times, standard operating procedures of the Fire Service Agency in which the evaluation is being conducted will govern. Fire Service Agencies should have available for evaluators a copy of manufacturer specifications and the Fire Service Agencies standard operational guidelines.

The JPRs covered in this Task Book meet or exceed all NFPA published standards for this certification level at the time of this publication. Mention of NFPA and its standards do not, and are not intended as adoption of—or reference to—NFPA standards. For more information on the complete job performance requirements and data, see the individual DPSST Task Book for that certification level.

Oregon Administrative Rule 259-009-0062

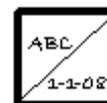
Fire Service Personnel Certification

(D) Task books must be monitored by a Field Training Officer approved by the Department. The Field Training Officer must be certified at or above the level being monitored and have at least five (5) years inspection experience. The Department may approve other Field Training Officers with equivalent training, education and experience as determined by designated Department staff.

HOW TO EVALUATE PERFORMANCE:

Each JPR has one corresponding box to the right in which to confirm a candidate's success. The evaluator shall indicate successful passing by the candidate of each JPR by initialing and dating (see example).

8.3.1 Identifying Response Objectives. Given an analysis of a hazardous materials/WMD incident, the incident commander shall be able to describe the steps for determining response objectives (defensive, offensive, and nonintervention).



TASK BOOK QUALIFICATION RECORD

FOR THE CERTIFICATION LEVEL OF

HAZARDOUS MATERIALS INCIDENT COMMANDER

Prior to becoming certified in this position, the NFPA 472 Hazardous Materials/WMD Incident Command candidate must successfully complete the following Job Performance Requirements (JPR) or competencies. The evaluator must initial and date the appropriate box to indicate successful completion. For each JPR or competency, there are requisite knowledge and skill requirements. The evaluator must initial and date in the box provided to indicate the meeting of those requirements before the candidate may proceed.

Goals and Expectations

The goal of the competencies at this level is to provide the hazardous materials incident commander with the knowledge and skills to evaluate a hazardous materials/WMD incident for safety and ensure that recognized safe operational practices are followed and to perform the tasks safely.

When responding to hazardous materials/WMD incidents, the hazardous materials incident commander must be able to perform the following tasks safely and effectively:

8.1 General.

8.1.1 Introduction.

8.1.1.1 The incident commander (IC) shall be that person responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources.

8.1.1.2 The incident commander shall be trained to meet all competencies at the awareness level (Chapter 4), all core competencies at the operations level (Chapter 5), and all competencies in this chapter.

8.1.1.3 The incident commander shall receive any additional training necessary to meet applicable governmental occupational health and safety regulations.

8.1.1.4 The incident commander shall receive any additional training necessary to meet specific needs of the jurisdiction.

8.1.2 Goal.

8.1.2.1 The goal of the competencies at this level shall be to provide the incident commander with the knowledge and skills to perform the tasks in 8.1.2.2 safely.

8.1.2.2 In addition to being competent at the awareness and operations levels, the incident commander shall be able to perform the following tasks:

(1) Analyze a hazardous materials/WMD incident to determine the complexity of the problem and potential outcomes by completing the following tasks:

(a) Collect and interpret hazard and response information from printed and technical resources, computer databases, and monitoring equipment.

(b) Estimate the potential outcomes within the endangered area at a hazardous materials/WMD incident.

(2) Plan response operations within the capabilities and competencies of available personnel, personal protective equipment, and control equipment by completing the following tasks:

(a) Identify the response objectives for hazardous materials/WMD incidents.

(b) Identify the potential response options (defensive, offensive, and nonintervention) available by response objective.

(c) Approve the level of personal protective equipment required for a given action option.

(d)*Develop an incident action plan, including site safety and control plan, consistent with the emergency response plan or standard operating procedures and within the capability of available personnel, personal protective equipment, and control equipment.

(3) Implement a response to favorably change the outcome consistent with the emergency response plan or standard operating procedures by completing the following tasks:

(a) Implement an incident command system/unified command, including the specified procedures for notification and utilization of nonlocal resources (e.g., private, state, and federal government personnel).

(b) Direct resources (private, governmental, and others) with task assignments and on-scene activities and provide management overview, technical review, and logistical support to those resources.

(c) Provide a focal point for information transfer to media and local elected officials through the incident command system structure.

(4) Evaluate the progress of the planned response to ensure the response objectives are being met safely, effectively, and efficiently and adjust the incident action plan accordingly.

(5) Terminate the emergency phase of the incident by completing the following tasks:

(a) Transfer command (control) when appropriate.

(b) Conduct an incident debriefing.

(c) Conduct a multiagency critique.

(d) Report and document the hazardous materials/WMD incident and submit the report to the designated entity.

8.2 Competencies — Analyzing the Incident.

8.2.1 Collecting and Interpreting Hazard and Response Information.

8.2.1.1 Given access to printed and technical resources, computer databases, and monitoring equipment, the incident commander shall collect and interpret hazard and response information not available from the current edition of the DOT Emergency Response Guidebook or an MSDS.

8.2.1.2 The incident commander shall be able to identify and interpret the types of hazard and response information available from each of the following resources and explain the advantages and disadvantages of each resource:

- (1) Hazardous materials databases
- (2) Monitoring equipment
- (3) Reference manuals
- (4) Technical information centers
- (5) Technical information specialists

8.2.2 Estimating Potential Outcomes. Given scenarios involving hazardous materials/WMD incidents, the surrounding conditions, and the predicted behavior of the container and its contents, the incident commander shall estimate the potential outcomes within the endangered area and shall complete the following tasks:

(1) Identify the steps for estimating the outcomes within an endangered area of a hazardous materials/WMD incident.

(2) Describe the following toxicological terms and exposure values and explain their significance in the analysis process:

- (a) Counts per minute (cpm) and kilocounts per minute (kcpm)
- (b) Immediately dangerous to life and health (IDLH) value
- (c) Infectious dose
- (d) Lethal concentrations (LC50)
- (e) Lethal dose (LD50)
- (f) Parts per billion (ppb)
- (g) Parts per million (ppm)
- (h) Permissible exposure limit (PEL)
- (i) Radiation absorbed dose (rad)
- (j) Roentgen equivalent man (rem); millirem (mrem); microrem (μ rem)
- (k) Threshold limit value ceiling (TLV-C)
- (l) Threshold limit value short-term exposure limit (TLV-STEL)
- (m) Threshold limit value time-weighted average (TLV-TWA)

(3)* Identify two methods for predicting the areas of potential harm within the endangered area of a hazardous materials/WMD incident.

(4) Identify the methods available to the organization for obtaining local weather conditions and predictions for short-term future weather changes.

(5) Explain the basic toxicological principles relative to assessment and treatment of personnel exposed to hazardous materials, including the following:

- (a) Acute and delayed toxicity (chronic)
- (b) Dose response
- (c) Local and systemic effects
- (d) Routes of exposure
- (e) Synergistic effects

(6)*Describe the health risks associated with the following:

- (a) Biological agents and biological toxins
- (b) Blood agents
- (c) Choking agents
- (d) Irritants (riot control agents)
- (e) Nerve agents
- (f) Radiological materials
- (g) Vesicants (blister agents)

8.3 Competencies — Planning the Response.

8.3.1 Identifying Response Objectives. Given an analysis of a hazardous materials/WMD incident, the incident commander shall be able to describe the steps for determining response objectives (defensive, offensive, and nonintervention).

8.3.2 Identifying the Potential Response Options. Given scenarios involving hazardous materials/WMD, the incident commander shall identify the possible response options (defensive, offensive, and nonintervention) by response objective for each problem and shall complete the following tasks:

(1) Identify the possible response options to accomplish a given response objective.

(2) Identify the purpose of each of the following techniques for hazardous materials control:

- (a) Absorption
- (b) Adsorption
- (c) Blanketing
- (d) Covering
- (e) Damming
- (f) Diking
- (g) Dilution
- (h) Dispersion
- (i) Diversion
- (j) Fire suppression
- (k) Neutralization
- (l) Overpacking
- (m) Patching
- (n) Plugging
- (o) Pressure isolation and reduction (flaring; venting; vent and burn; isolation of valves, pumps, or energy sources)
- (p) Retention
- (q) Solidification
- (r) Transfer
- (s) Vapor control (dispersion, suppression)

8.3.3 Approving the Level of Personal Protective

Equipment. Given scenarios involving hazardous materials/WMD with known and unknown hazardous materials/WMD, the incident commander shall approve the personal protective equipment for the response options specified in the incident action plan in each situation and shall complete the following tasks:

(1) Identify the four levels of chemical protection (EPA/OSHA) and describe the equipment required for each level and the conditions under which each level is used.

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

- (a) Degradation
- (b) Penetration
- (c) Permeation

(3) Describe three safety considerations for personnel working in vapor-protective, liquid splash-protective, and high temperature-protective clothing.

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

8.3.4 Developing an Incident Action Plan.

Given scenarios involving hazardous materials/WMD incidents, the incident commander shall develop an incident action plan, including site safety and control plan, consistent with the emergency response plan or standard operating procedures and within the capability of the available personnel, personal protective equipment, and control equipment, and shall complete the tasks in 8.3.4.1 through 8.3.4.5.5.

8.3.4.1 The incident commander shall identify the steps for developing an incident action plan.

8.3.4.2 The incident commander shall identify the factors to be evaluated in selecting public protective actions, including evacuation and sheltering-in-place.

8.3.4.3 Given the emergency response plan or standard operating procedures, the incident commander shall identify which agency will perform the following:

- (1) Receive the initial notification.
- (2) Provide secondary notification and activation of response agencies.
- (3) Make ongoing assessments of the situation.
- (4) Command on-scene personnel (incident management system).
- (5) Coordinate support and mutual aid.
- (6) Provide law enforcement and on-scene security (crowd control).
- (7) Provide traffic control and rerouting.
- (8) Provide resources for public safety protective action (evacuation or shelter in-place).
- (9) Provide fire suppression services.
- (10) Provide on-scene medical assistance (ambulance) and medical treatment (hospital).
- (11) Provide public notification (warning).
- (12) Provide public information (news media statements).
- (13) Provide on-scene communications support.
- (14) Provide emergency on-scene decontamination.
- (15) Provide operations-level hazard control services.
- (16) Provide technician-level hazard mitigation services.
- (17) Provide environmental remedial action (cleanup) services.
- (18) Provide environmental monitoring.
- (19) Implement on-site accountability.
- (20) Provide on-site responder identification.
- (21) Provide incident command post security.
- (22) Provide incident or crime scene investigation.
- (23) Provide evidence collection and sampling.

8.3.4.4 The incident commander shall identify the process for determining the effectiveness of a response option based on the potential outcomes.

8.3.4.5 The incident commander shall identify the safe operating practices and procedures that are required to be followed at a hazardous materials/WMD incident.

8.3.4.5.1 The incident commander shall identify the importance of pre-incident planning relating to safety during responses to specific sites.

8.3.4.5.2 The incident commander shall identify the procedures for presenting a safety briefing prior to allowing personnel to work on a hazardous materials/WMD incident.

8.3.4.5.3* The incident commander shall identify at least three safety precautions associated with search and rescue missions at hazardous materials/WMD incidents.

8.3.4.5.4 The incident commander shall identify the advantages and limitations of the following and describe an example where each decontamination method would be used:

- (1) Absorption
- (2) Adsorption
- (3) Chemical degradation
- (4) Dilution
- (5) Disinfection
- (6) Evaporation
- (7) Isolation and disposal
- (8) Neutralization
- (9) Solidification
- (10) Sterilization
- (11) Vacuuming
- (12) Washing

8.3.4.5.5* The incident commander shall identify the atmospheric and physical safety hazards associated with hazardous materials/WMD incidents involving confined spaces.

8.4 Competencies — Implementing the Planned Response.

8.4.1 Implementing an Incident Command System.

Given a copy of the emergency response plan and annexes related to hazardous materials/WMD, the incident commander shall identify the requirements of the plan, including the procedures for notification and utilization of nonlocal resources (private, state, and federal government personnel), and shall meet the following requirements:

(1) Identify the role of the incident commander during a hazardous materials/WMD incident.

(2) Describe the concept of unified command and its application and use at a hazardous materials/WMD incident.

(3) Identify the duties and responsibilities of the following hazardous materials branch/group functions within the incident command system:

(a) Decontamination

(b) Entry (backup)

(c) Hazardous materials branch director or group supervisor

(d) Hazardous materials safety

(e) Information and research

(4) Identify the steps for implementing the emergency response plans required under Title III Emergency Planning and Community Right-to-Know Act (EPCRA) of the Superfund Amendments and Reauthorization Act (SARA) Section 303, or other state and emergency response planning legislation.

(5) Given the emergency response planning documents, identify the elements of each of the documents.

(6) Identify the elements of the incident management system necessary to coordinate response activities at hazardous materials/WMD incidents.

(7) Identify the primary government agencies and identify the scope of their regulatory authority (including the regulations) pertaining to the production, transportation, storage, and use of hazardous materials and the disposal of hazardous wastes.

(8) Identify the governmental agencies and resources that can offer assistance during a hazardous materials/WMD incident and identify their role and the type of assistance or resources that might be available.

8.4.2* Directing Resources (Private and Governmental).

Given a scenario involving a hazardous materials/WMD incident and the necessary resources to implement the planned response, the incident commander shall demonstrate the ability to direct the resources in a safe and efficient manner consistent with the capabilities of those resources.

8.4.3 Providing a Focal Point for Information Transfer to the Media and Elected Officials. Given a scenario involving a hazardous materials/WMD incident, the incident commander shall identify information to be provided to the media and local, state, and federal officials and shall complete the following tasks:

(1) Identify the local policy for providing information to the media.

(2) Identify the responsibilities of the public information officer at a hazardous materials/WMD incident.

(3) Describe the concept of a joint information center (JIC) and its application and use at a hazardous materials/WMD incident.

8.5 Competencies — Evaluating Progress.

8.5.1 Evaluating Progress of the Incident Action Plan.

Given scenarios involving hazardous materials/WMD incidents, the incident commander shall evaluate the progress of the incident action plan to determine whether the efforts are accomplishing the response objectives and shall complete the following tasks:

(1) Identify the procedures for evaluating whether the response options are effective in accomplishing the objectives.

(2) Identify the steps for comparing actual behavior of the material and the container to that predicted in the analysis process.

(3) Determine the effectiveness of the following:

- (a) Control, containment, or confinement operations
- (b) Decontamination process
- (c) Established control zones
- (d) Personnel being used
- (e) Personal protective equipment

(4) Make modifications to the incident action plan as necessary.

8.6 Competencies — Terminating the Incident.

8.6.1* Transferring Command and Control. Given a scenario involving a hazardous materials/WMD incident, the emergency response plan, and standard operating procedures, the incident commander shall be able to identify the steps to be taken to transfer command and control of the incident and shall be able to demonstrate the transfer of command and control.

8.6.2 Conducting a Debriefing. Given scenarios involving a hazardous materials/WMD incident, the incident commander shall conduct a debriefing of the incident and shall complete the following tasks:

- (1) Describe three components of an effective debriefing.
- (2) Describe the key topics in an effective debriefing.
- (3) Describe when a debriefing should take place.
- (4) Describe who should be involved in a debriefing.
- (5) Identify the procedures for conducting incident debriefings at a hazardous materials/WMD incident.

8.6.3 Conducting a Critique. Given details of a scenario involving a multiagency hazardous materials/WMD incident, the incident commander shall conduct a critique of the incident and shall complete the following tasks:

- (1) Describe three components of an effective critique.
- (2) Describe who should be involved in a critique.
- (3) Describe why an effective critique is necessary after a hazardous materials/WMD incident.
- (4) Describe what written documents should be prepared as a result of the critique.
- (5) Implement the procedure for conducting a critique of the incident.

8.6.4 Reporting and Documenting the Hazardous Materials/WMD Incident. Given a scenario involving a hazardous materials/WMD incident, the incident commander shall demonstrate the ability to report and document the incident consistent with local, state, and federal requirements and shall complete the following tasks:

(1) Identify the reporting requirements of the federal, state, and local agencies.

(2) Identify the importance of the documentation for a hazardous materials/WMD incident, including training records, exposure records, incident reports, and critique reports.

(3) Identify the steps in keeping an activity log and exposure records for hazardous materials/WMD incidents.

(4) Identify the requirements for compiling hazardous materials/WMD incident reports found in the emergency response plan or standard operating procedures.

(5) Identify the requirements for filing documents and maintaining records found in the emergency response plan or standard operating procedures.

(6) Identify the procedures required for legal documentation and chain of custody and continuity described in the standard operating procedures or the emergency response plan.