

Hazardous Materials Response Basics

Business Purpose

- 80-90% of hazardous materials incidents occur at fixed sites such as factories and storage facilities. 10-20% occur on highways. Fire Departments that have both a major highway and a fixed site such as a factory and storage facility have an almost 100% chance of responding to a call involving hazardous materials. The city of Odessa has multiple fixed sites and multiple major highways making proper and effective training a necessity.
- Currently, city of Odessa, Delaware trains probationary firefighters in multiple pre-requisite knowledge courses at the State of Delaware Fire School. However, it has been observed both in speaking with probationary firefighters and also listening to the feedback from those who attend the courses that they are “dry” and “boring” and do not promote retention of material being taught that is both essential and lifesaving. Additionally, the state currently only offers their training three times per year, which poses issues with scheduling and completion of the course. It is important for our fire department to develop an introductory level course to introduce our probationary firefighters to hazardous materials response basics in order to reduce the amount of money the department is spending on sending new recruits to school only for the department to have to retrain them and also to reduce the confusion seen on hazardous materials response calls by clearly explaining how to successfully identify the specific substance posing the hazard using the Emergency Response Guidebook (ERG).
- The department seeks to develop in-house training that can be managed by their LMS and offered when probationary firefighters are ready to take the course as opposed to relying on the state offering the training which currently only happened three times per year. This gives the department an advantage of certifying new recruits and decreasing response time to hazardous materials calls.
- It is desired that city of Odessa firefighters both volunteer and paid understand the importance of safety, the knowledge of the Emergency Response Guidebook, and how to identify basic emergency placard characteristics.

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<i>Target Audience</i>	The audience for this training is probationary firefighters who have completed basic firefighting skills, structural firefighting skills, and are ready to take the hazardous materials course.
<i>Training Time</i>	30 minutes
<i>Training Recommendation</i>	To reduce costs associated with sending probationary firefighters to a course that has not been reported as being impactful and has also not demonstrated retention of knowledge, it is recommended that 1 eLearning module designed in Articulate 360 Storyline be developed with interactive activities, relatable characters, and real-life scenarios. This recommendation also allows the department to train probationary firefighters as they are prepared to start the course rather than waiting for the state of conduct the training which currently is only offered 3 times per year, thereby giving the department an advantage of having more trained firefighters who can respond to emergencies.
<i>Deliverables</i>	<ul style="list-style-type: none"> • 1 complete storyboard • 1 e-learning course <ul style="list-style-type: none"> ○ Developed in Articulate Storyline ○ Voiceover Narration ○ Engaging and interactive presentation using scenarios allowing learners to choose their responses and be given immediate feedback. ○ Male and Female avatars used to present on screen information. ○ Final evaluation
<i>Learning Objectives</i>	<p>Learners will be able to:</p> <ul style="list-style-type: none"> • Define what a hazardous material is. • Summarize the steps for how to safely respond to a hazardous materials incident. • Recognize what information is contained on a hazardous materials placard
<i>Training Outline</i>	<ul style="list-style-type: none"> • Introduction • Navigation • Pre-Assessment: Drag and Drop the following items into the correct category (learners will be presented with obvious and not so obvious hazardous materials found in businesses and homes. • Learning Objectives Presented

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	<ul style="list-style-type: none">• Revisiting pre-assessment to define what a hazardous material is and why the objectives of this training are so important. (Objective 1)• The Importance of Safety (Objective 2)• Scenario 1: Firefighters in firehouse discussing memorizing colors of placards and the amount of information and how it is overwhelming. Introduce Emergency Response Guidebook• Reading a Placard:<ul style="list-style-type: none">○ Class 1: Color○ Class 1: Divisions○ Class 1: Special Symbols○ Class 1: Placard numbers• Apply knowledge (Scenario 2): Using information on a placard to locate information in the Emergency Response Guidebook. Class 1 (Explosives) will be utilized.• Practice Scenarios (free response/knowledge checks)• Summary• Quiz• Course Completion
<i>Assessment Plan</i>	<ul style="list-style-type: none">• Practice scenarios using the ERG as a resource (learner will need to make choices based on information provided)• Five assessment questions at the end of the module• Learners must pass the assessment with a score of 80% or better (4/5 questions correct with two attempts allowed and review of material).