Category V

Criterion 5H: Hazardous Materials (Hazmat)

The agency operates an adequate, effective, efficient, and safe hazardous materials program directed toward protecting the community from the hazards associated with the uncontrolled releases of hazardous and toxic materials. The agency must conduct a thorough risk-analysis as part of activities in Category II to determine the need for specific hazardous materials program. Agencies that only provide first responder services must also complete this criterion.

Summary:

The operations and training for the Hazmat Team falls under the supervision of the Operations Division and Training Division. The Lawrence-Douglas County Fire Medical Department is responsible for overall management of Hazardous Material incidents in Douglas County using a unified command structure established with the jurisdictional fire department. The Hazmat Team responds to hazardous material releases, including decontamination for both victims and responders at large and small scale incidents. The Hazmat Team operates with IFSAC certified technician and operation level members. The Department maintains relationships with Douglas County Emergency management, the University of Kansas, Kansas Department of Health and Environment, the Environmental Protection Agency, State of Kansas Fire Marshal’s Office, Regional Hazmat Teams (KSTF 2), Civil Support Team (73rd CST), local facilities and other organizations.
Performance Indicators:

CC 5H.1 Given the agency’s standards of cover and emergency deployment objectives, the agency meets its staffing, response time, station(s), apparatus, and equipment deployment objectives for each type and magnitude of hazardous materials incident(s).

Description
The department meets its baseline deployment objectives as identified in department SOP Response Performance and Outcomes Appendix A, Baselines (2013-2017). Response performance objectives are described to include staffing, response time, pumping capacity, and other capabilities of the first arriving unit (distribution) and the effective response force (concentration). The department is also working on a GPS traffic pre-emption system with the Public Works Department which enhances travel time to incidents based on control over all travel lights between a unit’s geographic position and the location of an incident.

Distribution / First unit to stop loss
For 90 percent of all low risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, with a minimum of 3 firefighters and 1 officer, (4) total; is: 9 minutes and 33 seconds in urban areas. The first-due unit is capable of: establishing command; performing an initial scene assessment; performing air quality analysis; assisting with an evacuation; ventilating a structure; performing gross decontamination; and requesting additional resources. These operations are performed utilizing safe operational procedures.

For 90 percent of all moderate risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, with a minimum of 3 firefighters and 1 officer, (4) total; is: 10 minutes and 14 seconds in urban areas. The first-due unit is capable of: establishing command; performing an initial scene assessment; performing air quality analysis; assisting with an evacuation; ventilating a structure; performing gross decontamination; and requesting additional resources. These operations are performed
For 90 percent of all high risk hazardous materials response incidents, the total response time for the arrival of the first-due unit, with a minimum of 3 firefighters and 1 officer, (4) total; is: 12 minutes and 35 seconds in urban areas 29 minutes and 57 seconds in rural areas. The first-due unit is capable of: establishing command; performing an initial scene assessment; performing air quality analysis; assisting with an evacuation; ventilating a structure; performing gross decontamination; and requesting additional resources. These operations are performed utilizing safe operational procedures.

Concentration / Effective Response Force
For 90 percent of all low risk hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF), with a minimum of 3 firefighters and 1 officer, (4) total; is: 9 minutes and 52 seconds in urban areas. The effective response force is capable of: establishing command; performing an initial scene assessment; performing air quality analysis; assisting with an evacuation; ventilating a structure; performing gross decontamination; and requesting additional resources. These operations are performed utilizing safe operational procedures.

For 90 percent of all moderate risk hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF), with a minimum of 4 firefighters and 2 officers, (6) total; is: 11 minutes and 2 seconds in urban areas. The effective response force is capable of: establishing command; performing an initial scene assessment; performing air quality analysis; assisting with an evacuation; ventilating a structure; performing gross decontamination; providing a hose line for protection; providing advanced medical care; transporting the patient to the hospital; and requesting additional resources. These operations are performed utilizing safe operational procedures.

For 90 percent of all high risk hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF), with a minimum of 10
firefighters and 6 officers, (16) total, 4 being hazardous materials technicians; is: 30 minutes and 25 seconds in urban areas and no qualifying performances in rural areas. The effective response force is capable of: establishing command; performing an initial scene assessment; establishing a hazard zone; establishing a hazmat group; performing research; performing air quality analysis; assisting with an evacuation; ventilating a structure; performing gross decontamination; performing technical decontamination; providing a hose line for fire protection; providing advanced medical care; transporting the patient to the hospital; and requesting additional resources. These operations are performed utilizing safe operational procedures.

**Appraisal**

The effectiveness of the program has been measured based on historical response outputs, such as response time for the first arriving unit and the effective response force. Transitioning the focus of performance quality towards program specific outcomes would assist the department to identify the effectiveness the ERF.

**Plan**

The accreditation manager will communicate with the fire chief identifying resources needs in order to mine outcome data more specifically in order to establish baseline outcome performances in different planning zones by May 2018. These measures will lead to goals and focused areas for prevention or enhanced response strategies.

**References**

5H.2 The agency maintains appropriate training, operations policies, and documentation that response personnel are compliant with all applicable hazardous materials regulations and laws.

Description
The Firehouse® Fire Records Management System provides data to analyze hazmat response time and training hours. The Hazmat Response SOP directs members to efficiently operate at the Operations and Technician level; addressing the baseline and benchmark objectives and level of response for hazardous materials incidents. The hazardous materials team utilizes the standardized HMT ICS structure, National Incident Management (NIMS) Incident Command System (ICS) and the Hazmat IQ system. The Hazmat program team’s goal is to provide nine hours of operations level hazmat training to department members on an annual basis. Hazmat Teams Technicians, with the assistance of the Training Division, conduct the annual training to ensure compliance with NFPA and OSHA standards. Hazmat Team receives additional training hours by conducting in house drills, equipment reviews, and outside training; i.e. Hazmat IQ, 73rd Civil Support Team, Emergency Management, Department of Homeland Security, and University of Kansas Fire Rescue Training Institute, and Kansas Division of Emergency Management & Homeland Security.

Appraisal
The Firehouse® Records Management System provides query options for incident details and response time data. The Firehouse® database has provided good documentation on training hours across several categories to reflect capabilities and provides documentation for State Technician certification. The Hazmat Response SOP has worked well for hazardous material response and is currently being updated to be more consistent with other department special team SOP’s. Department members are currently meeting the goal of receiving nine (9) hours of hazmat training annually.

Plan
The Chief of Hazmat, Hazmat Program Manager, and Hazmat Captains will continue to update and revise SOPs related to the Hazmat Program. The Department will continue to
provide hazmat training on an annual basis covering relevant procedures and conduct performance based training. The Hazmat Program Manager will oversee the development of a monthly performance based training program for Hazmat Team members. The department recently purchased Target Solutions for training documentation. Target Solutions will become the sole source for Training documentation and will be a resource for additional training opportunities for members unable to attend the annual hazmat training.

References
SOP 209.10 Hazmat Response
Annual Training Plans
Technician certifications (Available on site)
Firehouse® training report example (Available on site)
Target Solutions (Available on site)
CC  5H.3  The agency conducts a formal and documented appraisal, at least annually, to determine the effectiveness of the hazardous materials program and its impact on meeting the agency's goals and objectives. This appraisal must include a comprehensive evaluation of the response components, including mutual aid, when part of the deployment model.

Description
The Hazmat Program Team (Chief of Hazmat, Hazmat Program Manager and Hazmat Captains) meet a minimum of two times of a year to evaluate all facets of the hazmat program, including equipment, training, SOP’s and operational issues to ensure the hazmat program team is meeting the agency’s goals and objectives. All hazmat team equipment is inspected each shift for on the primary apparatus and monthly for the hazmat trailer. The Firehouse® records management system provides incident details for response analysis. Analysis of annual department hazmat drills, company drills, monthly training sessions and actual hazardous materials incidents provide and assessment of team performance.

Annually, the Hazmat Program Team conducts a formal and documented program appraisal at the monthly manager’s meeting. The appraisal includes an analysis or response components, equipment and training to determine the effectiveness of the program on meeting the department’s goals and objectives. At least two goals and objectives are identified for the next program appraisal cycle.

Appraisal
The current methods of appraisal have been adequate to evaluate the Hazardous materials program and to make adjustment as needed. The appraisal at the Monthly Manager’s Meeting offers valuable feedback from the department’s managers on opportunities for improvement.
Plan
The Hazmat Program Team will continue to monitor the efficiency in team operation by communication and cooperation between all shifts on a daily basis. The Hazmat Program Team will meet twice annually at a minimum to contribute ideas and resolve challenges. Documentation continues to be an area of needed improvement. The Hazmat program team will review all hazmat related information that is collected in Firehouse at our bi-annual meetings.

References
Hazmat Program Team Minutes
Firehouse documentation (Available on site)
Hazmat Annual Program Appraisal
5H.4 The agency complies with all aspects of applicable hazardous material regulations such as, annual refresher training, medical monitoring of response personnel, annual physical examinations as applicable per standards, and exposure record retention.

**Description**
The department provides training annually on hazardous materials response in compliance with 29CFR 1910.120 (f). The annual training sessions are broken into three separate days. One of the training days is dedicated to running a simulation where each response component is in place to evaluate the personnel needs of an actual incident. All department members who enter the “hot zone” are provided medical monitoring prior to and after the exercise just as it would be done in an emergency. Annually, all department members are required to have a physical examination at Lawrence Memorial Hospital business health that includes blood work, vision tests, hearing tests, spirometry, physical agility, EKG, treadmill if over 40 years old, blood draw with lab work, urine test, and flexibility. If an exposure to a hazardous substance is suspected the department member evaluated by a physician at LMH and exposure documentation is completed. All documentation of exposures are kept for the duration compliant with CFR 1910.1020 (h)(3).

**Appraisal**
The department’s Hazmat training is adequate and provides a well-rounded base of knowledge for department members responding to hazardous materials incidents. In the event that a department member is exposed or injured during the response a process is in place to document the exposure, seek medical assistance and provide ongoing medical evaluation and care.

**Plan**
The department will continue to deliver annual department hazmat training to its members. The department will continue to support annual fit for duty physicals. The department will maintain documentation on exposure history for each department member exposed and keep apprised of best practices related to exposure documentation and retention.
References

29 CFR 1910.120 (f)
29 CFR 1910.1020 (h)(3)

Annual Hazmat Training Example