

HSMS EMERGENCY RESPONSE

In 1997, U. S. Army Garrison – Michigan (Detroit Arsenal) began the Hazardous Substance Management System (HSMS) implementation process. The HSMS program was initiated to control and manage hazardous materials and to ensure the proper disposal of hazardous waste. Since its inception and implementation, the HSMS program has reduced the amount of hazardous materials procured; the volume of hazardous waste transported off site for disposal and has become a vital resource for Pollution Prevention and Recycling.

As an initial part of the program, a cost tracking program was developed to provide continual cost tracking on a daily, weekly or monthly basis. Each “customer” worksite/”STOP” was assigned a Job Order Number (JON) to track and manage hazardous material purchases and the disposal costs associated with their respective mission. This collection of data proved to Managers and Technicians that the cost of hazardous waste disposal could be offset by ordering only the exact quantity of materials they need to accomplish their mission. Additionally, finding alternative methods in which to use excess materials no longer required, further reduced the disposal cost associated with each “customer stop,” which resulted in an increased of both efficiency and effectiveness of our HSMS program.

In September 2005, the installation conducted an Antiterrorism/Force Protection Exercise. During the critical “Hot Wash/Lessons Learned” portion of the exercise, the need for First Responders to retrieve Material Safety Data Sheets (MSDS) during an emergency was identified. The Program Manager for Hazardous Materials/Waste was tasked with developing an electronic program (MSDS Database) which would identify all chemicals and their respective MSDS in the event our Hazardous Material Management Center (HAZMART) was affected during a real world crisis.

The first step in the development and implementation of the MSDS Database was to scan all MSDS into an electronic format which was linked to the HSMS database for Safety and Health information. The next step was to identify all product types, quantities and the different storage locations on the facility. Collecting and centrally locating this information into a database provided our First Responders an effective tool they can now use when responding to an incident.

The “Firefighters Right to Know” was used as a guide in the development and implementation of an Emergency Response Database. The database annotates each building at the USAG-M (Detroit Arsenal) using existing floor plans to identify locations of where hazardous materials/waste is stored within each building. By utilizing the “Hazard Identification for Fire Fighting” standard, specialized hazard identification code, recognizable by icon and color (see below), was developed for use within the database. Instantly, Emergency Response personnel responding to an incident now have immediate access to the location of hazardous materials, quantity of materials and MSDS for the materials and all safety issues involved with hazardous materials (i.e. water reactive, explosive and/or flammable) when responding to an emergency.

-  - Mass Explosion
-  - Non-Mass Explosion, Fragment producing
-  - Mass fire, minor blast or fragment
-  - Moderate fire, no blast
-  - Poison
-  - Water Reactive

Typically, fire and or explosion type emergencies do not contain itself within the building but rather pose a threat to the areas in close proximity of the emergency. To assist the Firefighter when responding to the incident, fuel storage and ammunition storage locations that may possibly have a negative impact on the response activity were also included into the MSDS Database. The MSDS database application is user friendly, easy to navigate and powered by current Microsoft applications; therefore no additional 'stand alone' software is required.

An example of how the Emergency Response Assistance Database works:

- Fire Department receives a telephonic report of an incident/emergency.
- Dispatcher activates/opens Emergency Response Database.
- Dispatcher can simply select the corresponding icon of respective building experiencing the incident.
- Dispatcher is immediately linked to the floor plan listing storage locations and quantities of hazardous materials.
- Dispatcher can select the specific storage location.
- The storage location automatically links Dispatcher to AUL and/or Project type materials being stored at the site.
- The ability to select any and all materials located at a specific storage location is possible with a click of the mouse.
- By selecting the material listed within the database, the Dispatcher is able to access the scanned image of the MSDS which provides health/safety data, along with any fire fighting hazards.
- The Dispatcher can then relay HAZMAT information to Police and Fire emergency personnel responding to the incident.



Training:

The USAG-M [Detroit Arsenal] Applications Data Base Manager (ADBM) provided training to all USAG-M (Detroit Arsenal) Fire Department personnel; including Dispatchers, Firefighters, Responders and Officers. In addition, training was provided to the Base Operations Contractor's Emergency Response Incident Commander and their Installation Response Team (IRT).

The undersigned has provided training and an operational briefing of the database to the USAG-M Commander, Deputy to the Commander, AT/FP associates, G2 associates Director of Security, Chief of Safety, Director of the DPW, Director of Logistics, and Chief, Environmental Management Division.

Special Acknowledgements:

Successful programs are developed and implemented using a “TEAM” approach. The same philosophy was used when developing and implementing the Emergency Response Database at the USAG-M [Detroit Arsenal]. At this time I’d like to acknowledge the instrumental members of my “team:”

- Aramis Hinds (DPRA Inc.) USAG-M ADBM
- Jeff Clark (ICI LLC) HAZMART Associate
- Lt. Potter (USAG-M Fire Department)

Without the dedication displayed by these associates the program would not have been developed and implemented in such an expeditious and professional manner.

Future enhancements to the database:

1. Emergency Response Guidebook: Data associated with emergency response actions.
2. The addition of utility (gas, water, & electrical) shut-off locations by building.
3. Stand up Emergency Response Stand-by Area within the HAZMART.

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