



EASTSIDE MAYHEM EXERCISE SERIES

After Action Report

Day 2: Giddings

November 2, 2016



Report Date: February 2017

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EXERCISE OVERVIEW



Exercise Overview

Exercise Name	Eastside Mayhem: Day 2—Giddings
Exercise Date	November 2, 2016
Exercise Location	Giddings, Texas
Scope	This was one of three operations-based regional exercises testing multi-jurisdictional response to chemical, biological, radiological, nuclear, and explosive (CBRNE) incidents. This exercise was held for four hours at the EDC tanks in Giddings, off of Highway 290. Players representing key participants of local response agencies drove the action of the exercise, while evaluators followed the process and decision making sequence. During the exercise, evaluators witnessed and documented the response actions of multiple agencies as they approached and responded to the realistic CBRNE based scenario.
Purpose	To validate current policies and procedures, to identify gaps, and to develop potential solutions in order to advance the Capital Area Council of Government (CAPCOG) region’s CBRNE procedures and the coordination between multiple agencies.
Mission Area(s)	Response
Core Capabilities	Environmental Response/Health and Safety Operational Coordination Operational Communications
Objectives	<ul style="list-style-type: none"> Regional Standardization of Equipment and Training (ReSET) CBRNE teams responding to a CBRNE incident involving an explosion with radiological contamination will assess the extent of radiological contamination and will mitigate a leaking hydrochloric acid railcar. Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities. Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.
Threat or Hazard	CBRNE/HazMat
Scenario	A radiological explosive device detonates near the water tower at the EDC Tanks in Giddings off Hwy 290, disseminating radioactive particles. The explosion knocks out the radio communications tower and throws shrapnel into a rail car containing hydrochloric acid, causing the railcar to leak.



The suspect in the explosion calls 911 and states he is the person who set off the explosion and has taken hostages inside the EDC materials supply building. The suspect states he was recently fired from EDC and threatens to blow up EDC if the manager is not released to him.

When Giddings Police Department (PD), Fire, Emergency Medical Services (EMS), and Sherriff's Office arrive at the supply building, they see a backpack with wires at the door (an improvised explosive device (IED)) and the suspect. The suspect reveals he has more explosives.

Austin Explosive Ordnance Disposal (EOD) and Regional Special Weapons and Tactics (SWAT) are requested. As EOD arrives and begins entry, their rad dosimeter goes off, indicating radioactivity in the vicinity.

After SWAT has cleared the building/complex, they report smoke coming from the rails and that their skin is red and irritated. The damaged railcar is discovered leaking 37% hydrochloric acid behind the building. Concurrently, 100 tons of ammonium nitrate is discovered in railcars on the tracks next to the leaking railcar. The San Marcos CBRNE team is dispatched to address the hydrochloric acid, as well as the radiological.

The 6th Civil Support Team (CST) is called to identify the source of radiation discovered by EOD and characterize the path of the cloud of radiation.

A complete master scenario events list (MSEL) is available upon request.

Sponsor

Capital Area Council of Governments (CAPCOG)

**Participating
Jurisdictions**

Agency	Number of Participants
6th Civil Support Team (CST)	10
Austin EMS	3
Austin EOD	8
Austin Fire Department (Fire, HazMat, Aerial)	15
CAPCOG	3
Cedar Park	4
City of San Marcos Fire Department	12
El Dorado	4
Georgetown	4
Giddings Police Department	8
Giddings Volunteer Fire Department (VFD)	8
Hutto Fire Rescue	3
Lee County Communications	3
Lee County Emergency Management	6
Lee Co EMS	6
Lee County Justice of the Peace	3
Lee County Sheriff's Office	4
Law Enforcement Standardization of Equipment & Training (LESET)	14
National Oceanic and Atmospheric Administration (NOAA)	2
Regional Standardization of Equipment & Training (ReSET)	6
Round Rock Fire Department Hazardous Materials Team	7
Texas Department of Public Safety (DPS)/Texas Division of Emergency Management (TDEM)	2
Travis County	3
Union Pacific	2
Williamson County Communications	4
Williamson County HazMat	2
Williamson County Public Information Officer (PIO)	2

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EXECUTIVE SUMMARY



Executive Summary

Purpose

On Wednesday, November 2, 2016, the CAPCOG hosted *Eastside Mayhem: Day 2—Giddings* as part of a three-day exercise series to validate current regional operations in response to chemical, biological, radiological, nuclear, and explosive (CBRNE) incidents.

The overall purpose of this regional full scale exercise (FSE) was to enhance the region's capability to respond to CBRNE incidents through practicing and testing notification procedures, hazard identification, establishing and maintaining unified command, and responding to the exercise scenario according to agency standard operating guidelines (SOGs).

Exercise Goal

The goal of this regional FSE series was to provide regional response organizations within the CAPCOG region the opportunity to assess procedures, validate information, and highlight gaps (both knowledge and processes) related to CBRNE threats.

Structure

This exercise was one of three FSEs in a series that simulated potential real world events. Each exercise was preceded with a participant briefing and exercise site tour and was followed by a hot wash. The exercise began with an inject to call dispatch describing the exercise scenario and concluded four hours later.



Responders patching the leak.

Thirty-two controllers/evaluators observed and captured the events of the exercise. The evaluators were asked to provide responses and feedback after the end of the exercise on overall exercise play, as well as specific information on the identified exercise focus areas.

This after action report and improvement plan (AAR/IP) was developed to document areas of strength and gaps witnessed during the exercise, and potential solutions to those gaps. This information was captured in a formal evaluation, as well as discussed during an after-action meeting held on December 16, 2016.



Responders approach the leaking rail car.



The leak in the side of the railcar.

Exercise Core Capabilities and Objectives

The exercise objectives outlined in Table 1 describe the expected outcomes for the exercise. The objectives were linked to the Federal Emergency Management Agency’s (FEMA’s) core capabilities. The objectives and aligned capabilities were guided by the Exercise Planning Team. A matrix of core capability performance can be found in Appendix C.

Table 1: Exercise Objectives and Associated Capabilities

Core Capability	Exercise Objective
Environmental Response/Health and Safety (HazMat)	ReSET CBRNE teams responding to a CBRNE incident involving an explosion with radiological contamination will assess the extent of radiological contamination and will mitigate a leaking hydrochloric acid railcar.
Operational Coordination	Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.
Operational Communications	Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.

Summary Analysis

Strengths identified in the exercise include:

1. Teams were able to successfully acquire and share chemical ID and placard.
2. Team members correctly chose the appropriate suits for the situation.
3. Safety zone and initial inclusion zones were appropriately set up and maintained.
4. Appropriate radiological monitors were chosen and the law enforcement team members were adequately assessed for radiological contamination upon exiting the hot zone.
5. Guardian System worked well with Austin Fire Department (AFD), Hays, and Williamson County units on system.
6. Crews were able to successfully report to people in incident command systems (ICS) positions from other departments.
7. 6th CST integrated seamlessly into the established unified command.
8. Communication was successfully maintained between command, the CBRNE branch, and entry teams.
9. Communications teams demonstrated the ability to adapt and overcome in not ideal circumstances.

Areas for improvement identified in the exercise include:

1. Local jurisdictions would benefit from protocols regarding the deployment of a multi-team backup system and additional training to identify the incident's needs.
2. Response personnel would benefit from familiarization with additional equipment.
3. Decontamination (Decon) personnel demonstrated a need for site setup selection reinforcement.
4. There is a need for greater understanding ICS unified command establishment for regional responses.
5. EOD guidelines were not followed during the transition from SWAT/EOD to Fire/CBRNE.
6. The region would benefit from additional efforts to bolster mobile communications procedures and functionality.

The following sections provide an overview of the performance related to each core capability and associated exercise objective, highlighting strengths and areas for improvement.



CAPABILITY ANALYSIS



Capability Analysis

Core Capability 1: Environmental Response/Health and Safety (HazMat)

The strengths and areas for improvement for the core capability aligned to this objective are described in this section. Recommendations associated with areas for improvement are provided in **bold** text.

Associated Objective:

ReSET CBRNE teams responding to a CBRNE incident involving an explosion with radiological contamination will assess the extent of radiological contamination and will mitigate a leaking hydrochloric acid railcar.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Teams were able to successfully acquire and share chemical ID and placard.

Strength 2: Team members correctly chose the appropriate suits for the situation.

Strength 3: Safety zone and initial inclusion zones were appropriately set up and maintained.

Strength 4: Appropriate radiological monitors were chosen and the law enforcement team members were adequately assessed for radiological contamination upon exiting the hot zone.

Strength 6: Guardian System worked well with AFD, Hays, and Williamson County units on system.



Teams working in their PPE during the exercise.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area of Improvement 1:

Local jurisdictions would benefit from protocols regarding the deployment of a multi-team backup system and additional training to identify the incident's needs.

Analysis:

Exercise players needed to recognize the size of the incident and establish appropriate teams and backup teams based on the incident needs. Due to the size of the incident in the scenario, it would have been beneficial to have a three-team rotating structure, instead of the usual entry team with a single back up. During a CBRNE incident, teams must go through the proper testing of vital signs before even beginning to don PPE. This process takes time, making it challenging to incorporate a third team when an emergency

occurs and that additional backup is needed immediately. Being prepared with three teams at the onset of an incident will ensure teams are staged and prepared to be brought into the response at any moment. **The region should provide additional training to all personnel levels on the standard procedures for filling team positions in response to large scale incidents.**

Area of Improvement 2:

Response personnel would benefit from familiarization with additional equipment.

Analysis:

The initial entry team was going to use plug-and-dike but were told not to by the Union Pacific railcar personnel as it would have caused damage to the prop being used in the exercise. This forced crews to think outside of the box and determine an alternate method. Crews successfully mitigated the leak on the railcar using a couple of unique methods. One method involved wrapping the railcar with chains and using a come-along to tighten down the patch over the leak. This was a lengthy and equipment-intensive operation, but it worked for the most part. A second method involved using Paratech struts to apply pressure to a patch over the leak. This worked to slow the leak considerably, but did not stop it completely. Many jurisdictions within the region do not have Paratech struts, or practice with them, making this method slightly more challenging. In a regional response, jurisdictions may be working with other jurisdictions that utilize different equipment. Therefore, it would benefit the region for responders to have knowledge of the methods used by all jurisdictions and be able to practice those methods. If Paratech struts are a method the region wants to prioritize, **procuring struts and magnet patch kits regionally is recommended.** To address familiarization, **the region should establish a method of understanding the equipment in each jurisdiction and provide additional training with this equipment.**



Teams work to patch the leak.

Area of Improvement 3:

Decon personnel demonstrated a need for site setup selection reinforcement.

Analysis:

Proximity between the CBRNE site and decon is essential to protect against secondary contamination. During the exercise, the location of the decon site was far away from the leaking railcar. In response, an all-terrain vehicle (ATV) was used to get from the decon edge of the hot zone to the railcar. As a result, there were incidents when personnel crossed over to the hot side of the decon corridor to assist personnel in getting into the ATV with equipment. Although this may not lead to much secondary contamination, the decon site was not ideal and could have been setup in better



Responders utilize an ATV to travel to the railcar.

spot to ensure the safety of all those responding to the incident. To address this, **decon placement guidelines should be reinforced for all personnel levels with focus applied to secondary contamination risks.**

Core Capability 2: Operational Coordination

The strengths and areas for improvement for the core capability aligned to this objective are described in this section. Recommendations associated with areas for improvement are provided in **bold** text.

Associated Objective:

Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Crews were able to successfully report to people in ICS positions from other departments.

Strength 2: 6th CST integrated seamlessly into the established unified command.



Responding jurisdictions collaborate during the exercise.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area of Improvement 1:

There is a need for greater understanding ICS unified command establishment for regional responses.

Analysis:

Exercise evaluators noted challenges regarding the establishment and maintenance of unified command during the exercise. As part of this challenge, ICS positions were not assigned in a timely manner, ultimately resulting in confusion and a lack of coordinated effort. A secondary challenge within the exercise unified command centered on tracking the resources available to be used in response. The command post had challenges identifying who was undertaking what task and the quantity of responders supporting that task. There was not formalized tracking process regarding who was left in staging or who was unassigned to roles and responsibilities. In a regional response, many entities are at play, both from different localities, but also different departments within those localities. response personnel tracking. **The region would benefit from both jurisdictional training, specifically with law enforcement agencies on ICS practices, but also from regional trainings on unified command.**

Area of Improvement 2:

EOD guidelines were not followed during the transition from SWAT/EOD to Fire/CBRNE.

Analysis:

There was a breakdown in the transition from SWAT/EOD to Fire/CDRNE. Per EOD guidelines, EOD should have responded with Fire and EMS at the outset. During the exercise, this did not occur resulting in response inefficiencies as the scenario included situations that would best be handled with the established multi-team approach. To address this, **response agencies should be refamiliarized with proper EOD protocol through multi-agency trainings, focusing on ensuring agencies respond during exercise play as they would in a real event.**

Core Capability 3: Operational Communications

The strengths and areas for improvement for the core capability aligned to this objective are described in this section. Recommendations associated with areas for improvement are provided in **bold** text.

Associated Objective:

Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.



Command strategizes with the communications truck in the background.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Communication was successfully maintained between command, the CBRNE branch, and entry teams.

Strength 2: Communications teams demonstrated the ability to adapt and overcome in not ideal circumstances.

Areas for Improvement

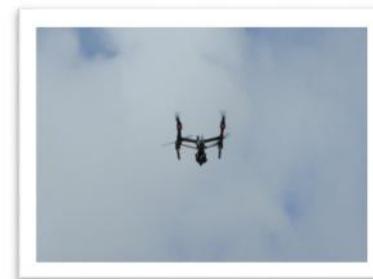
The following areas require improvement to achieve the full capability level:

Area of Improvement 1:

The region would benefit from additional efforts to bolster mobile communications procedures and functionality.

Analysis:

During the exercise, initial communications setup proved to be challenging. The site used had a dense tree line that blocked the signals mobile communications teams were setting up for the exercise. As such, the communications teams made the decision to move closer, allowing for direct communications to be effective. In this instance, the mobile communications team was able to respond and allow for proper communications, but **the region should undertake regional communications drills to ensure all teams are as ready to adapt.** Currently, it is not always standard for communications to go to incident scenes with teams, but instances such as the one brought about by this exercise highlight the important role communications can play. **The region should establish a**



AFD Red Team's drone capturing footage of the exercise play.

procedure to make it more standard for communications to accompany teams to incident sites. Likewise, additional equipment may be beneficial. In areas, such as Lee County, that do not currently have many repeaters and/or towers, it would be beneficial **to procure more towers and/or larger repeaters.** In the region, it would be beneficial to procure **mobile tactical repeaters to aid in the establishment and resilience of communication lines.**



CONCLUSION



Conclusion

Eastside Mayhem: Day 2—Giddings

This exercise provided a unique opportunity to integrate regional and local jurisdictional CBRNE response agencies in a FSE activity. Participants were able to engage in notification procedures to correct response agencies, recognize situational hazards, establish unified command, and perform activities according to SOGs to meet the exercise's needs. Exercise players and observers were able to identify areas of improvement relating to training, equipment, and operational procedures. The findings provide regional and local jurisdictional agencies with an adequate focus for future trainings to improve upon, including decon placement, unified command training, and EOD protocols. Corrective actions also suggest that the need for additional equipment and procedures for regional and local jurisdiction CBRNE response agencies exists.

Response agencies were able to successfully support the incident's needs with an effective and efficient response. By adding additional training, equipment, and procedures in the exercise's areas of improvement, regional and jurisdictional response teams will be able to better address future CBRNE incidents.



APPENDICES



Appendices

Appendix A: Acronyms

Table 2: Acronyms

Acronym	Term
AAR/IP	After Action Report/Improvement Plan
AFD	Austin Fire Department
ATV	All-Terrain Vehicle
CAPCOG	Capital Area Council of Government
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosive
CST	Civil Support Team
Decon	Decontamination
EMS	Emergency Medical Services
EOD	Explosive Ordnance Disposal
FEMA	Federal Emergency Management Agency
HazMat	Hazardous Materials
ICS	Incident Command System
IED	Improvised Explosive Device
LESET	Law Enforcement Standardization of Equipment & Training
MSEL	Master scenario events list
NOAA	National Oceanic and Atmospheric Administration

Acronym	Term
PD	Police Department
PIO	Public Information Officer
ReSET	Regional Standardization of Equipment and Training
SOGs	Standard Operating Guidelines
SWAT	Special Weapons and Tactics
TDEM	Texas Division of Emergency Management
VFD	Volunteer Fire Department

Appendix B: Capabilities Defined

The core capabilities addressed in this exercises are defined below.

Table 3: Core Capabilities Defined

Core Capability	Definition
Environmental Response/Health and Safety (HazMat)	Conduct appropriate measures to ensure the protection of the health and safety of the public and workers, as well as the environment, from all-hazards in support of responder operations and the affected communities.
Operational Coordination	Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.
Operational Communications	Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.

Appendix C: Capability Analysis Matrix

Aligning exercise objectives and core capabilities provides a consistent taxonomy for evaluation that transcends individual exercises to support preparedness reporting and trend analysis. Table 2 includes the exercise objectives, aligned core capabilities, and performance ratings for each core capability as observed during the exercise and determined by the evaluation team.

Table 4: Analysis of Core Capabilities

Objective	Core Capability	Performed without Challenges (P)	Performed with Some Challenges (S)	Performed with Major Challenges (M)	Unable to be Performed (U)
1. ReSET CBRNE teams responding to a CBRNE incident involving an explosion with radiological contamination will assess the extent of radiological contamination and will mitigate a leaking hydrochloric acid railcar.	Environmental Response/Health and Safety (HazMat)		S		
2. Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.	Operational Coordination				U
3. Ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among and between affected communities in the impact area and all response forces.	Operational Communications		S		

Ratings Definitions:

- Performed without Challenges (P): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- Performed with Some Challenges (S): The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s) and did not negatively impact the performance of other activities. Performance of this activity did not contribute to additional health and/or safety risks for the public or for emergency workers, and it was conducted in

accordance with applicable plans, policies, procedures, regulations, and laws. However, opportunities to enhance effectiveness and/or efficiency were identified.

- **Performed with Major Challenges (M):** The targets and critical tasks associated with the core capability were completed in a manner that achieved the objective(s), but some or all of the following were observed: demonstrated performance had a negative impact on the performance of other activities; contributed to additional health and/or safety risks for the public or for emergency workers; and/or was not conducted in accordance with applicable plans, policies, procedures, regulations, and laws.
- **Unable to be Performed (U):** The targets and critical tasks associated with the core capability were not performed in a manner that achieved the objective(s).

Appendix D: Improvement Plan

This IP has been developed specifically for CAPCOG region as a result of the *Eastside Mayhem: Day 2—Giddings* conducted on November 2, 2016.

Table 4: Improvement Plan

Capability	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Environmental Response/Health and Safety (Haz Mat)	Local jurisdictions would benefit from protocols regarding the deployment of a multi-team backup system and additional training to identify the incident's needs.	Provide training to all personnel levels on the standard procedures for filling team positions in response to large scale incidents.	ReSET	ReSET Chair	11/2016	11/2017
	Response personnel would benefit from familiarization with additional equipment.	Procure additional struts and magnet patch kits for the region.	ReSET	ReSET Chair	11/2016	11/2019
		Develop an understanding of the equipment used in each jurisdiction in the region and train regionally on the various types of equipment.	ReSET	ReSET Chair	11/2016	11/2018
	Decon personnel demonstrated a need for site setup selection reinforcement.	Reinforce decon placements guidelines with all personnel levels, focusing on secondary contamination risks.	ReSET	ReSET Chair	11/2016	11/2017

Capability	Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Operational Coordination	There is a need for greater understanding ICS unified command establishment for regional responses.	Provide regional training on unified command and jurisdictional training on ICS, with a focus on law enforcement.	CAPCOG	Eric Carter, CAPCOG Homeland Security Director	Ongoing	Ongoing
	EOD guidelines were not followed during the transition from SWAT/EOD to Fire/CBRNE.	Refamiliarize response agencies with proper EOD protocol through trainings in which agencies respond as realistically as possible.	ReSET/LESET/EOD	ReSET Chair/LESET Chair/EOD Representative	Ongoing	Ongoing
Operational Communications	The region would benefit from additional efforts to bolster mobile communications procedures and functionality.	Provide regional communications drills.	CAPCOG	Eric Carter, CAPCOG Homeland Security Director	Ongoing	Ongoing
		Establish a procedure for making it standard for communications to accompany teams to incident sites	ReSET/LESET	ReSET Chair/LESET Chair	11/2017	11/2018
		Procure mobile tactical repeaters for the region.	CAPCOG	Eric Carter, CAPCOG Homeland Security Director	Ongoing	Ongoing
		Procure additional communications towers for jurisdictions needing more resilient communications lines.	CAPCOG	Eric Carter, CAPCOG Homeland Security Director	Ongoing	Ongoing