

# **CBRN/HAZMAT ASSESSMENT TEAMS FOR MAJOR PUBLIC EVENTS**

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## **INTRODUCTION**

Major public events, such as state occasions and large sporting events, present an unusually attractive target for CBRN terrorism and unusually high vulnerability to hazardous materials (HAZMAT) incident. Major events, almost by definition, also provide a natural congregation of the world's media, thus making the political and psychological implications of a terrorist attack more troublesome. Any incident at a large public event will be instantly on television and the internet for the world to see. A large accident involving hazardous materials (HAZMAT), although it may not have been intentional, may have a similarly catastrophic impact. Such events must be considered along with CBRN terrorism as part of the "threat spectrum."

It is very important to undertake significant planning and preparedness efforts to prevent and/or respond to CBRN terrorism and HAZMAT incidents. However, it is also important to understand that false alarms are a huge problem at major events. We cannot afford to have chaos, confusion, or dilution of our specialized response assets due to frequent false alarms or over-reaction. While there are many tactics, techniques, and procedures for reducing false alarms or reducing their operational impact, one that is particularly useful is the "Hazard Assessment Team". The author has significant experience serving on such teams.

## **REQUIREMENT FOR AN ASSESSMENT SCHEME**

Some type of assessment scheme is required at a major event to assist the overall incident command structure in making timely and wise allocations of personnel and equipment. Often, 90% of planning effort in the CBRN / HAZMAT field for major events gets devoted to 1% of the threat spectrum. A diligent planner will spend a lot of time arranging for response to large-scale mass-casualty events, and rightly so. We have been fortunate that very few large-scale incidents have ever occurred in the CBRN field. The history of large HAZMAT events in the vicinity of major events is sparse. The challenge is to maintain readiness for the large events that may never occur, while effectively responding to intermediate scenarios.

The nature of emergency response is that there are typically a lot of general responders such as police, firefighters, and ambulance crews. However, the more specialized the response asset, the scarcer it becomes. As one example, there may be many firefighters, but only a few hazardous materials teams and urban search and rescue teams. At a large event with many different venues over a large area, it is impractical to dispatch scarce specialized assets for every single scenario and situation that might require their presence. Not only is this wasteful and expensive, specialized assets may get bogged down at nuisance calls, thus delaying their employment for real emergencies.

## **INTERMEDIATE SCENARIOS**

The security and safety effort at a major event is going to deal with many types of accidents and incidents. Most of these will be routine. Many large-scale emergencies involving CBRN/HAZMAT substances will often be self-evident in their presentation, such as an explosion or a transportation accident. However, it is just as likely that a serious CBRN/HAZMAT problem may not be obvious in its early stages. The early stages of a CBRN incident may appear to be something else.

An “intermediate scenario” is a situation that requires a security or safety response asset that might, hypothetically, involve CBRN/HAZMAT threats. There are an enormous type and variety of “intermediate scenarios” that might require a CBRN/HAZMAT response. Here are some examples of intermediate scenarios:

- Unattended suspicious vehicles
- Suspicious packages
- Reports of strange odors
- Letters/parcels containing suspect powders or liquids
- Medical responses to victims with unusual signs/symptoms
- Traffic accidents involving commercial vehicles
- Railway and commercial maritime incidents
- Building fires, particularly where there may be potential for dispersal of dangerous substances.
- Strange sensor readings
- Possible hoaxes and false alarms

## BUILDING THE TEAM

One approach to the assessment mission is to field small assessment teams that can rapidly deploy to an incident or accident and provide a skilled assessment of the situation, based on professional expertise, back to the incident commander, command post, or other higher authority. Such an assessment team can serve as an advanced reconnaissance element or scout to determine the need for additional assets, resolve minor issues with their own expertise, and generally serve as a useful additional set of eyes and ears.

The most mature example of an assessment team is the US Joint Hazard Assessment Team (JHAT) concept. JHAT has been used in hundreds of medium and large events. I have served as a member of a JHAT on numerous occasions in the US. Several documents and references speak about the JHAT concept, but none of them are really truly a full explanation of JHAT, as it is a concept that continues to evolve. A US-style JHAT is interagency and interdisciplinary. Typically, it is small enough to fit into a vehicle, thus JHATs tend to be no larger than 5-6 people. The JHAT is meant to be representative of the major agencies involved in the CBRN/HAZMAT planning and response effort. A typical Washington DC JHAT in 2005 consisted of an assistant fire chief, a Secret Service CBRN specialist, a military CBRN specialist, an FBI WMD specialist, and a Washington DC police sergeant. The basic concept is to have a broad swath of experience in the van, so that when you turn up at a potential incident the JHAT has combined expertise to assess the situation.

It is common practice at US major event to employ a “Joint Hazardous Explosive Response Team” (JHERT) composed of explosives technicians from various agencies. JHERTs and JHATs often work in parallel. The JHERT is intended to assess incidents that may require explosive ordnance disposal (“bomb squad”) procedures, such as suspicious packages and

abandoned vehicles. A JHERT fills a similar role for explosive responses that the JHAT does for CBRN/HAZMAT response. Many incidents will see the JHERT and JHAT both responding and assessing the situation. If the appropriate expertise exists, the JHERT can act as a “backup JHAT” and vice-versa. JHERT and JHAT teams need to work well together and understand each other’s mission and procedures. A common critique of the JHAT/JHERT concept is that there it creates confusion by having overlapping assessment teams in operation during an event. There is not any reason that a combined assessment team (a “joint” JHAT/JHERT) would not work, at least in theory. At a minimum, placing a skilled explosive technician in a JHAT would be a useful compromise.

## SIZE AND COMPOSITION

A hazard assessment team should be small enough that it keeps to a single vehicle. If you have to travel around in a minibus or a small convoy of vehicles, then the logistics of supporting the team, moving it around the city, and deploying it to incident sites becomes more complicated. A large team is a drain on resources, both intellectual and financial.

A team needs an appropriate mix of expertise. A two-man team probably does not have sufficient depth of knowledge and is not big enough to do an emergency assessment entry into a hazardous area. The objective is to have expertise across the various disciplines. A minimal objective would be to have police, fire service, military, and medical expertise sitting in the same van. An all-military team, for example, is not a very useful assessment team in a civil setting. Often JHATs do not seem to have much medical expertise. This is an operational shortcoming. There is great benefit to be achieved by having someone with an emergency medicine background on an assessment team. There is a strong medical dimension to most of the CBRN/HAZMAT threat spectrum. Having a JHAT member who can see an incident through the eyes of a medic is very useful in assessment efforts.

Many major events will be too big or too long in duration to be able to be supported by a single assessment team. The frequency of events requiring assessment may vary as well. There might be situations where multiple events requiring assessment accumulate. Even a small major event may need multiple teams in order to operate. Events with strict perimeters may require an inside team and an outside team.

Having team members with the correct rank is an important consideration. The ideal team has members who are not too junior and not too senior. The team members need to be sufficiently knowledgeable of CBRN/HAZMAT response to be able to make useful recommendations. They need to be of sufficient rank and experience to be able to enter the perimeter at an incident scene and gain useful information from the personnel already responding to an event. Very senior members of organizations may have been removed from street-level events for too long. Under many incident command schemes, a high-level official may get dragged into assume on-scene incident command if he outranks the local responders. This would make it difficult for the assessment team to extricate itself from minor incidents.

## EQUIPPING THE TEAM

Experience has shown that command, control, and communication situation at major events is often complex to the point of being obtuse. Each team member needs their own communication methods to reach back to his/her own chain of command. It sounds simple,

but the fact that a Secret Service person, an FBI agent, and a DC police sergeant were all in the same van on the streets of Washington DC with access to their own radio networks and getting emails on their blackberries was an unthinkable thought in the recent past.

In a very small event, a dismantled team might be able to do its job effectively. In all likelihood, a vehicle is required. A marked emergency services vehicle of some description is useful. Too large of a vehicle, such as a fire apparatus, begins to restrict mobility and parking, thus reducing the freedom of movement of the team. There have been times where an assessment team was far more worried about where to park the bus than about doing anything else.

The team should have basic PPE to allow for survivability. Assessment teams should also have detection and identification equipment. The exact type and variety of sensors will depend on the exact concept of operations that is put into place for the team. The assessment teams that I worked on in the past had some limited detection equipment such as photoionization detectors, handheld chemical warfare agent detectors, industrial 4-gas monitors, and handheld radioisotope identifiers. It is not suggested that a JHAT is going to need to be equipped to perform entries like a full hazardous materials team, but the ability to wave a PID over a puddle of what looks like water to see if there are any volatile vapors, for example, is highly useful in accomplishing the assessment mission.

## OPERATIONAL TACTICS

Assessment teams have several important missions. The first is to escalate. The team can examine situations and scenarios that may not appear to be major and realize that there is a need for bigger and more sophisticated intervention than was originally thought. The second mission is de-escalation. Historically, assessment teams have fulfilled an important role in de-escalation. Some incidents appear to be more than they really are. Some white powder incidents really are spilled flour on the floor of a bakery. People suffer from food poisoning without it really being a CBRN attack on the food supply. Sometimes radiation detectors alarm for reasons that have nothing to do with dirty bombs or stolen isotopes. The origins of the JHAT concept in the 1990s stem more from the need to “spool down” a big response than to “ratchet up” a small response.

A third mission is to serve as an intermediary between command centers and the field response. Improvements in communications technology and the concentration of management into command centers can have interesting effects on the management of incidents. It is now much easier than it was thirty years ago for an official in a command post to micro-manage events in the field. The last thing a hazardous materials technician needs is an assistant fire chief telling him, through a radio earpiece, to do a test again so that he can see it better on the live video link. Situations very close to this have occurred. A command post asking every 3 minutes for test results is probably not helpful to the battalion chief or police captain who is trying to manage the incident scene. Sometimes an assessment team can be a useful buffer between the response and the management. The JHAT may be better positioned to get on the mobile phone and explain in some detail what is going on, thus freeing up the on-scene staff to get on with their mission. This helps out both the responders and the command post.

While a JHAT is meant to be dispatched by an operations center to be its forward eyes and ears, it is very helpful to let them roam about the operational area. Like any good forward

reconnaissance element, a JHAT can sometimes find things that are not evident to the higher headquarter. A JHAT can provide proactive assessment ahead of dispatch by a centralized operations center. By observing activity in and around the major event, an operationally shrewd JHAT may notice accidents and incidents before they get reported up to a centralized operations center. For example, a JHAT observing a parade may notice a liquid spill in an adjoining street long before it is noticed and reported through other channels. Since a well-composed and well-equipped JHAT is simultaneously listening in on operational communications traffic from several different agencies, a JHAT may “catch wind” of a developing incident minutes before an operations center receives official notification, processes the information, and decides to dispatch the team. The time saved in such situations could be vital.

Some examples of “self-dispatch” include:

- Fire department radios report a structural fire at an industrial complex. The fire department representative knows from experience that some of the companies in the complex handle toxic industrial chemicals. JHAT decides to visit the incident scene to assess the risk.
- Police radio network reports the arrest of an individual with an amount of powder in a rucksack. While police agencies are working under the assumption that the powders are illegal narcotics, the JHAT decides, due to the proximity of the arrested person to major event activities, to investigate the nature of the unknown powder.
- While travelling on a road, the JHAT team notices an abandoned vehicle leaking an unknown liquid.

In each of these scenarios, it might take significant time for these incidents to be reported up to a central command center, for the command center to decide that they may be of CBRN/HAZMAT interest, and for the JHAT to get dispatched.

We must not have a situation where an assessment team becomes the only official way to pass judgment on whether or not an incident is serious. Emergency planning must still account for the fact that some incidents will require an immediate intervention and immediate dispatch of specialized assets. An assessment team is intended to be a set of eyes and ears for senior management; it is not intended to be the only eyes and ears. Incident commanders need to have the flexibility to send in whatever response that they feel appropriate. Senior managers and command centers need plans and guidelines that give guidance on scenarios in which response assets should not be delayed or impeded pending an assessment from the JHAT. Remember, JHAT is most useful in the “middle ground” of intermediate scenarios.

## REFERENCES

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