Discovery of Potassium Cyanide Following the Disruption of a Metal Cylinder Found During a Methamphetamine and Explosives Investigation

by Clayton H. Hawkins, Captain
Calaveras County Sheriff's Office Bomb Squad
Region I

Introduction

The Calaveras County Sheriff's Office Bomb Squad and Multiagency Methamphetamine Enforcement Team (Cal-MMET) conducted an investigation involving automatic weapons and narcotics. During their investigation, several fully automatic weapons were seized (including an AR-15, MAC-10, and UZI) along with several feet of time fuse, hobby fuse, and dozens of electric and non-electric blasting caps. In addition, deputies found a plastic container of potassium cyanide powder inside a metal cylinder after the cylinder's end cap was remotely removed.

Investigation

On September 12, 2007, bomb technicians and deputies from Cal-MMET were investigating a group of suspects who were selling methamphetamine and automatic weapons. One of the subjects was known to have prior methamphetamine manufacturing and possession of dangerous weapons charges.

Following enforcement activity at a residence related to the investigation, deputies found several feet of time and hobby fuse, four (4) dozen blasting caps (including 41 electric and 7 non-electric blasting caps), two (2) automatic weapons with silencers (a third weapon was found during a search warrant), and an electric firing device for a claymore mine. In addition, deputies found a suspicious looking metal cylinder with a screw-on end cap. On the side of the cylinder was a hand written label indicating "Dangerous do not open." A red colored skull and cross bones figure was drawn beneath the lettering. (See Figure 1.)

Figure 1

The metal cylinder was removed from the vehicle and placed on the side of the roadway. Technicians x-rayed the cylinder (using a foXray II imager). The x-ray showed that the cylinder contained a bottle. The bottle appeared to contain a granular solid as evidenced by an irregular "powder" line. (See Figure 2.)

Figure 2

continued on Page 66

Remote Opening of the Metal Cylinder

Bomb technicians believed that the powder inside the cylinder was a low explosive (e.g. black, flash, or smokeless powder.) They thought this because they had already recovered blasting caps and fuse from the suspect's vehicle and had information that the suspect was a contract bomb maker. In addition, the bomb squad had responded to this general area several times over the years and had rendered-safe several steel and PVC pipe bombs.

While the x-ray did not indicate the presence of a firing circuit (e.g. wires, batteries, or switches), technicians were not comfortable with manually unscrewing the cylinder's end cap. Instead, they decided to remove it remotely with a PAN (percussion actuated non-electric disruptor) using an AVON round. The cylinder was disrupted from a distance of 12 inches with a 5 degree attack angle. The procedure successfully removed the end-cap. (See Figure 3.)

Figure 3

When technicians re-approached the cylinder the found that the end of the bottle had broken. No powder however, had been released. The bottle was removed from the cylinder. It was made of clear plastic. On the side of the bottle was another handwritten label indicating Ferris Cyanide." Inside the bottle was a combination of fine red and red/white powder. (See Figure 4.)

Figure 4

Because the investigation was associated with methamphetamine, Cal-MMET deputies and technicians believed the powder was red phosphorus used to manufacture clandestine methamphetmaine[1].

Normal safety precautions were implemented and the powder was collected and placed into an evidence container.

Identification of the Red Powder

The Calaveras County Sheriff's Office Hazardous Materials Team sampled the red powder and field screened it using HAZCAT. Results indicated that the substance was positive for cyanide[2].

The red powder was also evaluated using an infra red mass spectrometer (Sensor IR). The spectra of the sample indicated that the substance was potassium cyanide[3].

Conclusions

This incident is a good example how bomb technicians can develop tunnel vision. After years of handling the same type of low explosive devices it is easy to assume that all powders found inside containers are low explosives. This can be a dangerous in our business and can lead to unnecessary mistakes.

While there was little if any intelligence in this incident to suggest that the cylinder contained something other than an explosive, it provides a valuable lesson that we have to be prepared to find anything inside suspicious containers and packages. While it is unreasonable to expect technicians to approach every post-disrupted device in Level B/PPE (non-vapor tight chemical suite, boots, gloves, and self-contained breathing apparatus), this incident suggests that we should be prepared to quickly change our protection level when we find substances other than obvious explosive compounds.

I would like to thank Sergeant Blain Smith and Senior Deputy Sheriff Phil Ross in the development of this article.

References

[1] California Specialized Training Institute, Methamphetamine Chemical Waste Identification System, Hydriodic Acid and Red Phosphorus Methamphetamine Synthesis, page 142.

[2] HAZCAT Chemical Identification System, Cyanide Test (Kotney), Haztech System Inc., 2001, page 78.

[3] Sensor IR Inc., Travel*IR* System.