Chemical Agent Identification Sets

Recognize Retreat Report

Between the 1930's and 1960's, the Department of Defense produced Chemical Agent Identification Sets (CAIS) to train Soldiers to identify and decontaminate chemical agents in the field. Similar kits, known as war gas identification sets were produced by civilian companies for civilian use (e.g., civil defense training purposes).

For identification, individual vials were detonated with blasting caps and Soldiers walked through the cloud to become familiar with the odor of the most common chemical agents. For decontamination of equipment, chemical agents were applied to surfaces (e.g., vehicles) to train Soldiers in cleaning them for safe use.

The vast majority of CAIS made were consumed in training; however, some CAIS issued for training but not used, were disposed of by burial. In the late 1970's and early 1980's, all CAIS remaining in the stockpile were treated and destroyed. Prior to the 1970's, one of the approved procedures for units to dispose of CAIS was burial on installation training ranges or training areas.

CAIS were either buried in their original metal or wooden storage and shipping containers - called Pigs - or loose. Normally, CAIS vials were broken before burial and the contents were neutralized. Because burial was one of the standard and approved procedures for disposing of CAIS, the possibility remains that buried CAIS may be discovered at active and former military installations.

How do I recognize CAIS?

Chemical Agent Identification Sets consist of small quantities of various chemical agents in glass ampoules/ vials or bottles that were packed in metal shipping containers or wooden boxes. The glass vials and bottles can be found packed in their original storage and shipping containers, or they may be loose.

The CAIS most commonly encountered are flamed sealed glass vials from the M1 Detonation Kit. The kit contained 48 vials individually packed in cardboard tubes shipped in a heavy metal container. These vials, which are 1 inch in diameter and 71h inches long, contain 1.4 ounces of liquid that is either dilute mustard, lewisite, or chloropicrin, or concentrated phosgene.

Two less common CAIS sets (CAIS K941, toxic gas set M-1; and CAIS K942, toxic gas set M-2/E11) consist of about 12 glass bottles, containing 3~ to 4 ounces of neat (pure) mustard each. Due to the amount of agent in these kits, they are considered more hazardous.

CAIS may appear to be brand new or old, rusted, or damaged. Depending upon the chemical agent involved and the environment (e.g., heat, sunlight, length of burial) a CAIS experienced, the color of the chemical agent can vary drastically.

What should I do if I find or think I have found a CAIS?

If you discover or think you may have found a CAIS, either in a storage or shipping container, or loose vials or bottles, **recognize** that they should not be touched or moved, carefully leave **(retreat)** from the area and **report** the find to local law enforcement (call 911). Local law enforcement will contact military experts for assistance.

The military will arrange for the collection, assessment, transportation and disposal of the CAIS. CAIS that contain dilute chemical agents or concentrated phosgene may be sent directly to an EPA permitted treatment, storage, disposal facility (TSDF) as hazardous waste, or may be destroyed on site using the Single CAIS Accessing and Neutralization System (SCANS) with wastes sent to a TSDF for destruction.

Under no circumstances should you attempt to pick up a set, move it or attempt to destroy it yourself. Seek immediate medical attention if you believe you have been exposed to chemical agents of any type.

DON'T FORGET

CAIS should be considered dangerous and should not be touched. CAIS can be found on the surface or buried at active and former military installations, particularly areas used for training.

REMEMBER THE 3Rs

RECOGNIZE: Recognize when you may have encountered CAIS and that the chemicals CAIS may contain, even if solidified, can cause serious injury.

RETREAT: Do not touch, move or disturb it, but carefully leave the area.

REPORT: Immediately notify the police.

For more information on this and related issues visit the Explosive Safety Education Website at: www.denix.osd.mil/uxo

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