Chemical Weapons Elimination

Incineration

Incineration is the most common method of chemical agent destruction.
It was selected in the early 1980s by the Department of Defense as the preferred method for disposal of chemical agents and munitions after long and careful consideration of several technologies. The National Research Council endorsed this selection in 1984 and continues to regard incineration as a demonstrated safe baseline technology.

Incineration is appropriate for several major reasons:

- It effectively breaks down any type of chemical agent to relatively harmless or controllable end products.
- It is reasonably well-controlled and well-understood.
- It provides capable operation that is safe for workers and the public.

Reliability of Incineration

No community resident has ever been exposed to harmful levels of chemicals from disposal operations. To date, millions of pounds of chemical agents have been destroyed safely at the Johnston Atoll facility in the Pacific Ocean; and in Tooele, Utah; Anniston, Alabama; Umatilla, Oregon; and Pine Bluff, Arkansas.

Many safeguards are built into materials transport and disposal systems. For example,

- Containers for weapon-related materials are closely examined for leaks before they are used.
- All containers are inspected and monitored again after materials are added and after they are moved and off-loaded to the disposal plant.
- Air in the disposal facility passes through a cascading airflow system to prevent migration of chemical agents to the outdoor environment.
- Air is continuously monitored in areas of the plant where a chemical release is most likely. These monitoring systems can detect levels chemical agent lower than those considered acceptable for occupational exposure.
- All gases released from disposal stacks are continuously monitored and the entire disposal system is programmed to stop if a chemical agent is detected.

For more information about incinerator air emissions and safety issues, read

- Incinerator Air Emissions – Inhalation Exposure Perspectives
- Safe Disposal of Chemical Weapons

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