



Program Executive Office, Assembled Chemical Weapons Alternatives Closure Terminology

The Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA) was responsible for the safe and environmentally compliant destruction of the remaining declared U.S. chemical weapons stockpile formerly stored at the U.S. Army Pueblo Chemical Depot in Colorado and the Blue Grass Army Depot in Kentucky and is now responsible for the closure of the destruction facilities.

The [Pueblo Chemical Agent-Destruction Pilot Plant](#) (PCAPP) destroyed the stockpile in Colorado and the [Blue Grass Chemical Agent-Destruction Pilot Plant](#) (BGCAPP) destroyed the stockpile in Kentucky, completing stockpile destruction operations by the Chemical Weapons Convention treaty commitment of Sept. 30, 2023.

PEO ACWA will continue to prioritize the safety of the workforce, community and environment throughout the closure process. As PEO ACWA focuses on closure, specific terms and acronyms being used are described below.

Terminology

Administrative Close-Out: The final step of the closure process, during which any remaining property is dispositioned, contracts and agreements are closed, and real property (land and any remaining infrastructure and buildings) is vacated and returned to the land owner (U.S. Army).

Airborne Exposure Limit (AEL): Allowable concentration in the air for workplace and general population exposures. AELs include:

- General Population Limit (GPL): A criterion that is set to protect the general public, including all ages and medical conditions. GPL is the maximum concentration to which members of the general population may be continually exposed for the following duration and agent:
 - Three continuous years for mustard agents H/HD/HT
 - 24 hours per day for seven days a week for nerve agent GB
 - 24 hours per day for three days a week for nerve agent VX
- Worker Population Limit (WPL): A time-weighted average for a conventional eight-hour workday and a 40-hour week.
- Short-Term Exposure Limit (STEL): A 15-minute time-weighted average exposure that should not be exceeded during the workday, even if the 8-hour WPL is not exceeded. Exposures up to STEL should not occur more than once per day for H/HD/HT and VX and not more than four times per day for GB, with at least 60 minutes between events.
- Immediately Dangerous to Life or Health (IDLH) value: An atmosphere that poses an immediate threat to life, causes irreversible adverse health effects, or impairs an individual's ability to escape from a dangerous atmosphere. IDLH values are used to select appropriate personal protective





equipment (PPE) for personnel entering toxic environments and as criteria to ensure that workers can safely escape from a toxic environment in the event of the failure of PPE.

Clean for Unrestricted Use: Items, equipment or facility areas that have never been exposed to or contaminated with chemical agent, might have been exposed to chemical agent vapor for short durations but meet certain monitoring and risk criteria, or have been decontaminated to less than the GPL.

Closure: The final phase of a PEO ACWA chemical weapons demilitarization project. It includes workforce draw-down, destruction or disposal of remaining secondary waste, decommissioning of facilities and equipment, decontamination of equipment and facilities, property dispositioning and the close-out of permits and contracts.

Clean Closure: Decontamination or removal of all equipment, systems and areas containing, or contaminated with, hazardous waste (including chemical agents) or hazardous constituents in a manner that is protective of human health and the environment and such that no post-closure care or monitoring is required.

Contaminated: Items, equipment or facility rooms that have been exposed to chemical-agent liquid, vapor or hazardous constituents and have not undergone sufficient decontamination.

Decommissioning: Withdrawal of a facility or equipment from service, followed by decontamination (as applicable) and transition to required end-state configuration to ensure readiness for disposition, demolition or return to the landowner (real property).

Decontamination: The process of making safe any object or area by absorbing, destroying, neutralizing, making harmless or removing the hazardous substance (e.g., chemical agent or other hazardous material) from the object or area.

Demilitarization Protective Ensemble: PPE designed for safe entry into contaminated areas for decontamination, waste management or other work, including a back-up air pack, vitals monitoring equipment, a two-way radio and a protective encapsulating suit with a positive-pressure air system.

Demolition: Dismantling, destruction or razing of facilities or equipment for scrap recovery, followed by off-site disposition or disposal.

Demolition Plan (PCAPP): The guiding document that details the methods and practices used in the final removal of equipment, buildings, and structures from the destruction facility site, including the measures taken to mitigate the spread of any contamination during the closure process.

Demolition Readiness Declaration (BGCAPP): A contract letter that references the reports that support the declaration, to include sampling and Unventilated Monitoring Testing (UMT) reports and completed "Clean for Release for Demolition" forms. It also discusses the post UMT activities performed to prepare the buildings and the final state in which the buildings are left for demolition.

Demolition Readiness Report (PCAPP): A formal report that details the decontamination of a hazardous waste management unit (HWMU) in accordance with the closure plan and confirmed via the PCAPP Demolition Readiness Sampling and Analysis Plan. The reports are reviewed and approved by the



independent Colorado registered professional engineer and the Colorado Department of Public Health and Environment prior to demolition of that HWMU.

Dismantling: Breaking down equipment or systems into multiple pieces for removal.

Disposition: Process of disposal of government property:

- **Personal Property:** Any end item, material, spares or repair parts. Static Detonation Chamber (SDC) units are included in this category.
- **Real Property:** Land, buildings, utility systems and other infrastructure delineated on the land owner's real property inventory.

End State Memorandum of Understanding: The agreement between PEO ACWA and the U.S. Army installations housing PEO ACWA chemical weapons destruction facilities and offices regarding the end state of real property used by PEO ACWA on each installation and detailing the final configuration of real property returned to the installations after completion of facility and PEO ACWA closure.

Facility Closure Plan: The overarching document guiding the closure process for the chemical weapons destruction facilities, including main plant and SDC facilities.

General Population Limits: See *Airborne Exposure Limits*.

Hazardous Waste Management Unit: A contiguous area of land in which hazardous waste is placed or managed. This could include a waste pile, waste storage area, incinerator or tank system and associated piping.

Headspace Monitoring: The process of measuring contained off-gassing vapors after a required hold time and temperature conditions from an item in an enclosed or shrouded unventilated space.

Immediately Dangerous to Life or Health values: See *Airborne Exposure Limits*.

Lay-up: Noncontaminated or contaminated equipment or facilities placed into a holding state for potential later use or disposition.

Monitoring: The continuous or periodic act of taking air samples to determine whether a chemical agent is present and at what concentration.

Occluded Space: Cavity or other space that can trap liquid agents, prevent contact with a decontamination solution or prevent agent vapors from trapped liquid agents from being detected during monitoring.

Scabbling: A technique for roughening surfaces or reducing concrete sections by breaking up and removing a layer from the top. Scabbling is one of the methods that may be used to eradicate occluded spaces in concrete in contaminated areas of destruction facilities.

Short-Term Exposure Limits: See *Airborne Exposure Limits*.

Shrouding/Tenting: Enclosure of an area or equipment to prevent air exchange outside the enclosed volume. Used for headspace monitoring.



Surety: Standards and programs for the security of chemical weapons and for the safety and reliability of the personnel working with them. The chemical weapons destruction facilities will remain subject to surety standards until all recoverable liquid agents have been destroyed. At the BGCAPP main plant, all liquid agents drained from munitions and from agent processing equipment (e.g., pumps, piping and vessels) have been destroyed, agent processing equipment has been flushed, and the flush has been destroyed. Destruction of all recoverable agents at BGCAPP will be deemed complete when the last containerized, drained rocket warhead is destroyed in the SDC units and verification is complete. At PCAPP, destruction of all recoverable agents was considered complete when all munitions were processed, all agents in agent collection and neutralization tanks were destroyed, agent tanks/lines were flushed and verification activities were completed.

Uncontaminated: Equipment or areas never exposed to liquid or aerosol chemical agents or vapor concentrations exceeding the STEL concentration.

Unrestricted Release: Decontamination condition that allows release to the general public without restriction.

Unventilated Monitoring Test: A collection of representative air samples captured from a prescribed space in an unventilated condition, which is achieved when an enclosed space, such as a room, is isolated from exchanges of exterior sources of air. The test determines if the room has been decontaminated sufficiently to meet the decontamination criteria prescribed in the chemical weapons destruction facility's Resource Conservation and Recovery Act (RCRA) permit. The UMT is sometimes referred to as the milestone when all rooms in the Main Plant or SDC units have achieved the decontamination criteria prescribed in the RCRA permit. (There will be a UMT milestone for each of the plants and SDC units.)

Vapor Screening Level (VSL): The agent concentration level to which an item is monitored under unventilated conditions to determine the level of cleanliness. The VSLs for chemical agents H, HD, HT, GB and VX are the results of a single near-real-time monitoring cycle and are based on the STEL concentration independent of exposure duration for each agent.

Worker Population Limits: See *Airborne Exposure Limits*.



Typical Acronyms Used During Closure

AEL	Airborne Exposure Limit
BRAC	Base Realignment and Closure
CAA	Clean Air Act
CAC	Citizens' Advisory Commission (Colorado and Kentucky)
CDCAB	Chemical Destruction Community Advisory Board (Kentucky)
CWC	Chemical Weapons Convention
CWG	Closure Working Group
DLA	Defense Logistics Agency
DPE	Demilitarization Protective Ensemble
DRR	Demolition Readiness Report
EPA	U.S. Environmental Protection Agency
GPL	General Population Limit
GSA	General Services Administration
HWMU	Hazardous Waste Management Unit
IDLH	Immediately Dangerous to Life or Health
ISSA	Intra Service Support Agreement
MINICAMS	Miniature Continuous Air Monitoring System
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
OLDCC	Office of Local Defense Community Cooperation
OPCW	Organisation for the Prohibition of Chemical Weapons
OSHA	Occupational Safety and Health Administration
PMR	Permit Modification Request
RCRA	Resource Conservation and Recovery Act
STEL	Short-Term Exposure Limit
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage and Disposal Facility
UMT	Unventilated Monitoring Test
VSL	Vapor Screening Level
WPL	Worker Protection Limit