



BLUE GRASS
CHEMICAL ACTIVITY

SAFE TODAY, SAFER TOMORROW



BGCA



Overview of Blue Grass Chemical Activity

BLUE GRASS CHEMICAL ACTIVITY (BGCA) ensures the safe and secure storage of the chemical weapons stockpile. “Safe Today, Safer Tomorrow” is the guiding directive of every operation. BGCA is a tenant organization on Blue Grass Army Depot (BGAD) located near Richmond, Kentucky. The stockpile is stored on 250 acres of the Depot. The U.S. Army Chemical Materials Activity (CMA), headquartered at the Edgewood Area of Aberdeen Proving Ground, Maryland, is responsible for the storage of weapons on BGCA.

BGCA’s Emergency Operations Center (EOC) is manned continuously by highly trained technicians. The stockpile is surrounded by several meteorological towers transmitting current weather data to the EOC, where technicians produce daily work plans before any work is done. If the data indicates a potential chemical hazard would leave the Depot in an accident, the plan is altered to exclude that task. Work plans are communicated to the 10 surrounding counties and the Commonwealth of Kentucky EOC so all emergency response agencies are aware of Blue Grass stockpile activities.

BGCA considers safety of the workforce, surrounding communities and environment the top priority. The Army has safely stored chemical weapons at BGAD for more than 70 years and will continue to safely store the chemical stockpile until it is eliminated.

BGCA works closely with state oversight agencies, which monitor operations and activities. This ensures processes and procedures are performed in a coordinated, transparent and safe manner. This cooperation is a mainstay of BGCA’s management and communications philosophy.

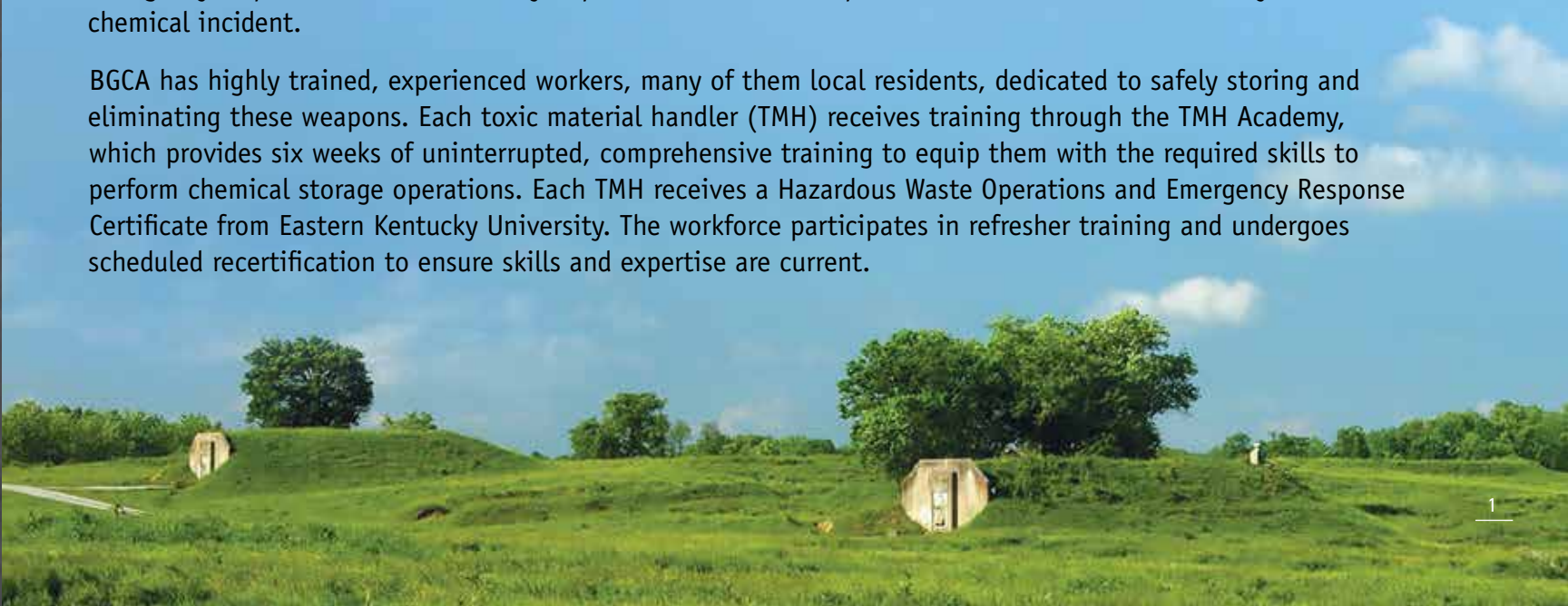
BGCA personnel regularly train for and test emergency preparedness capabilities, in close cooperation with local emergency responders, to continuously improve and enhance response time and skills in the unlikely event of a chemical incident.

BGCA has highly trained, experienced workers, many of them local residents, dedicated to safely storing and eliminating these weapons. Each toxic material handler (TMH) receives training through the TMH Academy, which provides six weeks of uninterrupted, comprehensive training to equip them with the required skills to perform chemical storage operations. Each TMH receives a Hazardous Waste Operations and Emergency Response Certificate from Eastern Kentucky University. The workforce participates in refresher training and undergoes scheduled recertification to ensure skills and expertise are current.

VALUES

BGCA employees adhere to the Army values to ensure work is done safely, securely and efficiently. The Army values are:

LOYALTY	Bear true faith and allegiance to the U.S. Constitution, the Army, the Depot and fellow employees
DUTY	Fulfill your obligations
RESPECT	Treat people as they should be treated
SELFLESS SERVICE	Put the welfare of the Nation, the Army and your co-workers before your own
HONOR	Live up to all the Army values
INTEGRITY	Do what’s right — legally and morally
PERSONAL COURAGE	Face fear, danger or adversity





Blue Grass Stockpile

The chemical weapons stockpile consists of 523 tons of nerve agents GB and VX as well as mustard agent-filled projectiles, warheads and rockets. The stockpile is stored in earth-covered magazines, commonly called igloos, on 250 acres of the Depot.

These igloos are designed to protect their contents from external factors such as storms, lightning and other weather-related events. Each structure is equipped with lightning protection. The entire storage area is protected by physical and electronic security features.

BLUE GRASS ARMY DEPOT

BGAD was created in 1941. Following World War II, the Depot started receiving munitions for renovation, storage and demolition. In the 1960s, BGAD merged with the Signal Depot in Lexington, forming the Lexington-Blue Grass Army Depot. The two depots remained joined until the 1980s when the Signal Depot closed. BGCA was created as a tenant organization on BGAD in 1995. Today, BGAD remains a major employer in Madison County. Its primary mission is to provide munitions, chemical defense equipment and Special Operations support to the Department of Defense.

CHEMICAL AGENTS STORED AT THE BLUE GRASS CHEMICAL ACTIVITY

NERVE AGENT

VX—Similar to present day insecticides, nerve agent VX is a clear, odorless and tasteless liquid. VX is a rapid-acting, lethal nerve agent that affects the nervous system by interfering with the signals sent from the brain to the vital organs and other parts of the body. As a result, hyperactivity occurs in the organs stimulated by the nerves. Symptoms of VX exposure include, but are not limited to, pinpointed pupils, runny nose, difficulty breathing, nausea, vomiting and convulsions.

GB (sarin) — GB is odorless and tasteless with an appearance similar to water. GB is a rapid-acting, highly volatile, lethal nerve agent that affects the nervous system by interfering with the signals sent from the brain to the vital organs and other parts of the body. As a result, hyperactivity occurs in the organs stimulated by the nerves. Symptoms of GB exposure include, but are not limited to, pinpointed pupils, runny nose, difficulty breathing, nausea, vomiting and convulsions.

BLISTER AGENT

Mustard (H) — The blister agent mustard causes chemical irritation and blistering, and is a known carcinogen. In its pure liquid state, mustard agent is colorless; when exposed to impurities, it becomes a pale yellow to brown oily substance. Symptoms of mustard agent exposure include, but are not limited to, inflammation of the eyes, nose and throat, trachea, bronchi, lung tissue and blisters to the skin. In amounts approaching the lethal dose, injury to bone marrow, lymph nodes and spleen may occur.



THROUGH TIME

U.S. Army creates Blue Grass Army Depot, originally known as Blue Grass Ordnance Depot

1941



Depot receives first shipment of mustard chemical weapons

1944



Monitoring

Chemical weapons stored at BGCA are consistently monitored with equipment that can detect agent at the parts-per-trillion level.

Primary monitoring of the stockpile is done with a sensitive gas chromatograph mounted in a vehicle known as a Real Time Analytical Platform (RTAP). The gas chromatograph is calibrated for the specific agent type in the igloo. It is used to test air drawn from the igloo, allowing the interior to be monitored without opening the door. After the igloo has been cleared and the door opened, the gas chromatograph continues to operate to alert the workers.

A second method of monitoring is checking each GB rocket individually for leaks. Each rocket is contained in a fiberglass shipping tube. Based on lot number and random sampling, individual rockets are checked by removing a plug in the nose piece of the tube and sampling the air inside. This shows immediately when a rocket is leaking before the leak gets out of the shipping and firing tube.

If a munition is leaking, a filter bank is connected to the igloo and the interior air is passed through the filter to ensure that no chemical agent is released. The leaking munition is sealed inside a leak-proof overpack container and stored in a separate igloo with other leaking rounds containing the same agent.



THROUGH TIME

Depot
receives
nerve agent
VX M55
rockets



1962

Depot
receives
nerve agent
GB M55
rockets



1963

Depot
receives
nerve agent
GB 8-inch
projectiles

1965

Community Involvement at BGCA

In a continuing effort to educate the community and promote safety of the stockpile and storage, the BGCA Public Affairs Office (PAO) offers educational tours, information products and guest speakers, and participates in local fairs and festivals.

One of the most popular tours at BGCA is the mock igloo, which mirrors igloos in the Chemical Limited Area (CLA). During this tour, employees demonstrate activities such as donning protective gear used to enter the igloos, monitoring procedures and showcase simulated munitions. BGCA partners with BGAD and Blue Grass Chemical Agent-Destruction Pilot Plant for community events to provide the public and elected officials consistent and up-to-date information.

Another way BGCA keeps stakeholders informed is the partnership with the Kentucky Chemical Destruction Community Advisory Board, which holds quarterly public meetings. These meetings provide a forum for BGCA staff, government officials, leadership, members of the commission and the public to exchange information regarding chemical weapons storage and elimination. The Kentucky governor appoints commission members who serve an unlimited term at the governor's discretion. Although the commission receives limited funding from the Department of Defense, it operates independently of the Army.

For information on how BGCA provides safe storage of the chemical weapons stockpile, contact:

BGCA PAO – (859) 779-6897



STAY INFORMED!

<https://www.cma.army.mil>

<https://www.cma.army.mil/BGCA>

www.bluegrass.army.mil

Depot receives
nerve agent
VX 155 mm
projectiles

1966



Public Law 99-145 designates
U.S. Army as organization
responsible for elimination of
U.S. chemical weapons stockpile

1986

Treaty Information



The United States and 86 other nations signed and ratified the Chemical Weapons Convention (CWC) in 1997, agreeing to eliminate chemical weapons and former production facilities, and halt the development, use, production and acquisition of chemical weapons. Today, more than 190 nations have ratified the CWC.

CMA is responsible for safely storing chemical warfare materiel and complying with the CWC treaty at the remaining two U.S. chemical stockpiles. The Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA) is responsible for eliminating U.S. chemical weapons stockpiles at these Army installations.

The Organisation for the Prohibition of Chemical Weapons (OPCW) annually inspects chemical stockpiles in support of the CWC. Compliance with this treaty and others is another facet of the storage mission of BGCA. Blue Grass has always fully complied with CWC objectives.

Detailed CWC and OPCW information can be found at www.opcw.org.

Chemical Stockpile Emergency Preparedness Program

The Chemical Stockpile Emergency Preparedness Program (CSEPP) teams with state, local emergency management officials, the Army and the Federal Emergency Management Agency (FEMA) to provide emergency preparedness and maximum protection to communities near chemical weapons stockpiles in the unlikely event of an accident. Since its inception, CSEPP's goal has been to educate and enhance emergency preparedness in communities surrounding the chemical stockpile, including those stored at BGAD.

Ten counties in Kentucky are affected by the chemical stockpile. Madison County, where BGAD is located, and the northwest portion of Estill County are considered Immediate Response Zones (IRZ). Areas in Clark, Estill, Fayette, Garrard, Jackson, Powell and Rockcastle counties are included in the Protective Action Zone (PAZ). Jessamine and Laurel Counties are considered Host counties, where citizens of the IRZ or PAZ may be relocated.

CSEPP sponsors an annual full-scale community disaster response exercise involving the 10 surrounding counties, the Army, FEMA and Kentucky.

Until the chemical stockpile is safely destroyed, CSEPP will continue to support efforts to ensure community preparedness and safety.

To learn more about each county's commitment to emergency preparedness and response, visit www.prepareky.com.

THROUGH TIME



U.S. Army and the Federal Emergency Management Agency establish Chemical Stockpile Emergency Preparedness Program in response to Public Law 99-145 calling for added protection. Although the new law reflects a greater awareness of the need to be prepared for a possible chemical accident, U.S. Army's storage and maintenance of the stockpile has been and continues to operate safely

CSEPP BY THE NUMBERS

10 **SURROUNDING COUNTIES**
notify and direct emergency response
actions for their local communities



5 **MINUTES**
Time allotted for BGCA to alert the
surrounding counties to activate:

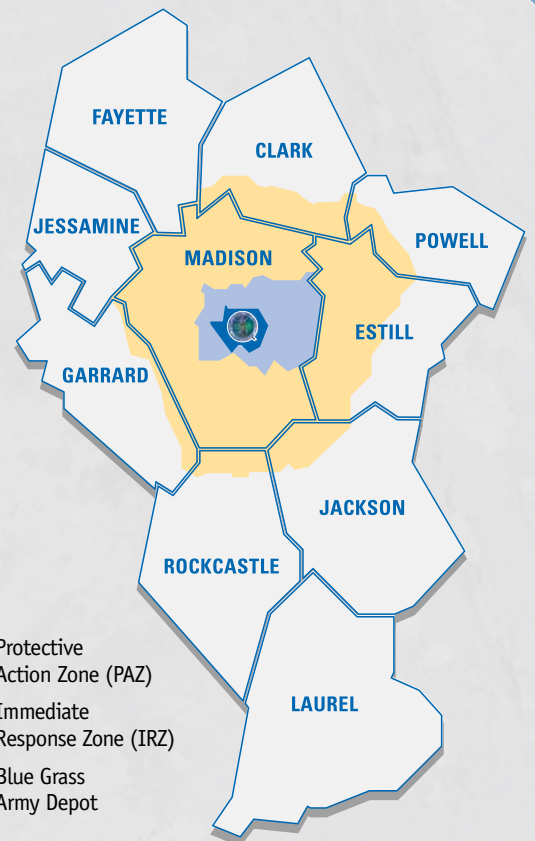


85 **HIGH-TECH
OUTDOOR SIRENS**

— & —



30,000+ **IN-HOME
ALERT
RADIOS**



Public Law 102-484 establishes Citizen's Advisory Commissions at each continental U.S. stockpile location. State governor appoints seven members, with two more members from state government agencies, responsible for chemical disposal program oversight

1992



U.S. Army
activates
Blue Grass
Chemical Activity

1995

What's in Store for Blue Grass Chemical Activity

When stockpile destruction is about to begin, munitions will be moved to the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP), a state-of-the-art facility designed to safely destroy the chemical weapons stockpile.

Safely transporting munitions from storage to the plant is a crucial process for BGCA. To ensure success, BGCA workers will load the chemical munitions into an Enhanced On-Site Container (EONC). EONC operators then transport the munitions to the destruction facility. EONCs, developed by the U.S. Army in partnership with Sandia National Laboratories, resemble metal tanks and are designed to resist impacts, punctures and fire to protect the workforce, community and environment.

Working in partnership with the community, the Army selected neutralization followed by supercritical water oxidation to destroy the nerve agent in the chemical weapons stockpile, and the Static Detonation Chamber to destroy the mustard-filled munitions. When the process is complete, operators will send the chemical waste to an approved treatment facility for disposal.



Enhanced On-Site Container



Static Detonation Chamber



Waste Management

THROUGH TIME

OPCW performs first
inspection of Blue
Grass chemical
weapons stockpile

1997



Blue Grass
Chemical Activity
celebrates
20th anniversary

2015



Blue Grass Chemical Agent-Destruction Pilot Plant

FUTURE

Once the Blue Grass Chemical Activity storage mission is completed, it will be closed following established permit and regulatory requirements and guidelines. The land will then revert to BGAD, which will have the ultimate decision in its reuse.



Contact Information

Blue Grass Chemical Activity (BGCA) Public Affairs Office (PAO) provides fact sheets, brochures and regulatory and permit documents on storage, monitoring and CSEPP. BGCA can also provide guest speakers to community organizations.

Contact:

For information on how BGCA provides safe storage of the chemical weapons stockpile:

BGCA PAO – (859) 779-6897

For information on how PEO ACWA will destroy the stockpile:

Blue Grass Chemical Stockpile Outreach Office – (859) 626-8944

For information on the management of the Nation's stockpile:

U.S. Army Chemical Materials Activity – (410) 436-4292
usarmy.cma.pao@mail.mil



[HTTPS://WWW.CMA.ARMY.MIL/BGCA](https://www.cma.army.mil/bgca)



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