

# OUR commitment *to* YOU... Safety *for*

- the Workers
- the Community
- the Environment



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CREATING A SAFER TOMORROW



## CONTINUING THE LEGACY OF SAFETY

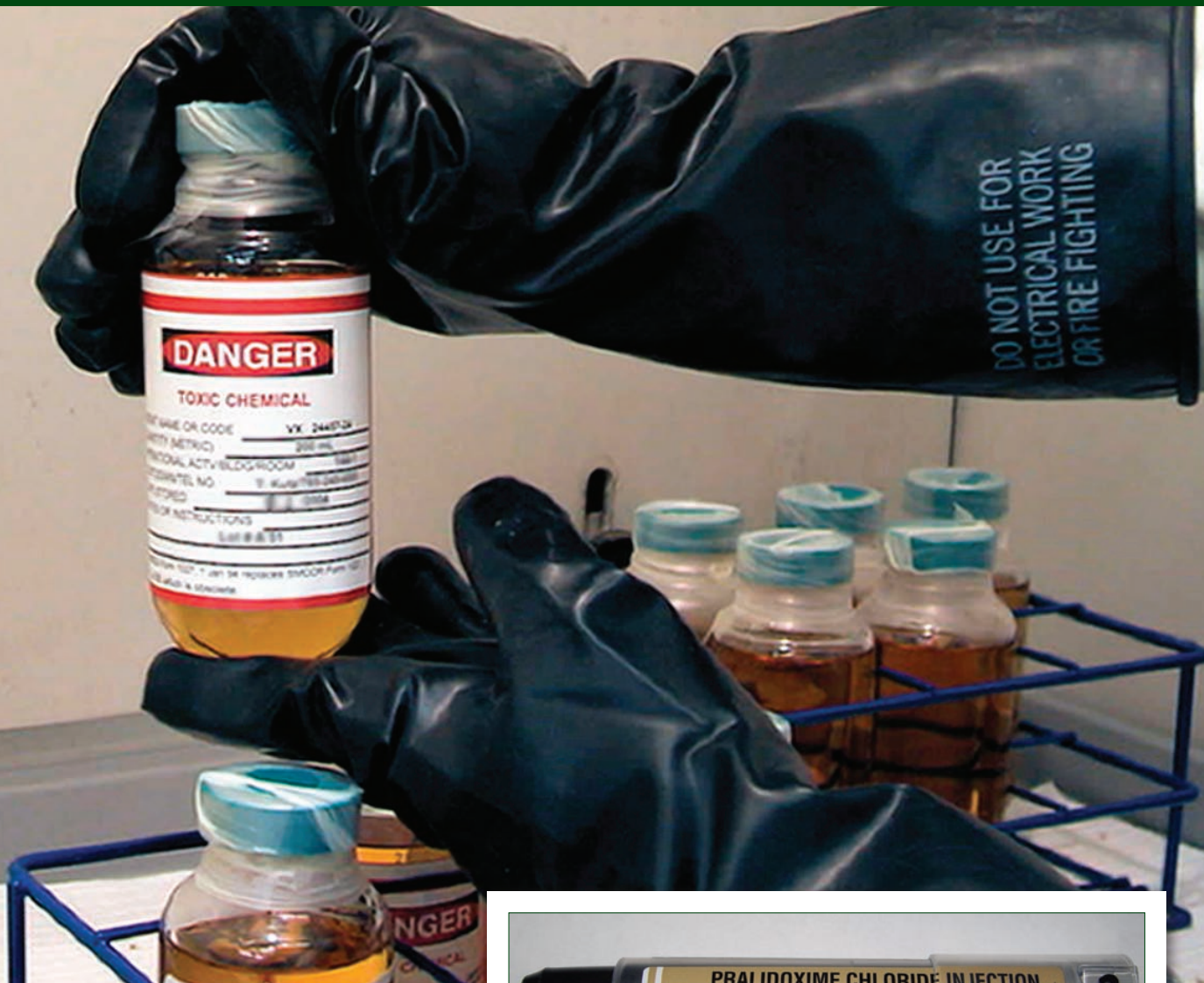
The Newport Chemical Depot (NECD) is a government-owned, contractor-operated military installation under the U.S. Army Chemical Materials Agency (CMA). In 1941, the Army established the installation as the Wabash River Ordnance Works. Since that time, the installation has undergone several name changes. In 1997, the installation was given its present title. The depot covers an area of approximately 7,000 acres in Vermillion County, Ind., about 32 miles north of Terre Haute. The NECD is one of nine original U.S. chemical weapons storage sites where the Army is working toward a common mission, to safely destroy the U.S. chemical weapons stockpile. Two of these sites have completed their portion of the weapons destruction mission.

In 1961, the sole U.S. chemical agent VX production facility was constructed at NECD. For more than seven years, workers at the NECD manufactured all of the VX nerve agent for U.S. defense stockpiles. These workers filled military munitions, such as rockets, bombs and spray tanks with chemical agent and prepared them for transport by rail to U.S. defense sites. The NECD was never intended to be a chemical agent storage site. In 1968, a presidential order was issued to halt the production of chemical agents. A moratorium on the transportation of existing chemical weapons and agents soon followed in 1969, which meant that the final inventory — more than 1,000 tons — of chemical agent VX produced at NECD was to be safely stored at the Newport site for nearly 40 years. Depot workers oversee safe and secure storage of the bulk chemical agent VX in carbon steel containers.

Mason & Hanger Corporation has been the operating contractor at NECD since 1986 and is responsible for depot operations, including security and fire protection. Parsons Corporation is the systems contractor at the Newport Chemical Agent Disposal Facility (NECDF), responsible for the safe destruction of the Newport chemical agent stockpile. In April 2000, CMA and Parsons broke ground and began construction of a unique neutralization facility designed to safely destroy the chemical agent VX stored at the NECD. Construction of the disposal facility was completed in June 2003 and agent destruction operations began on May 5, 2005.

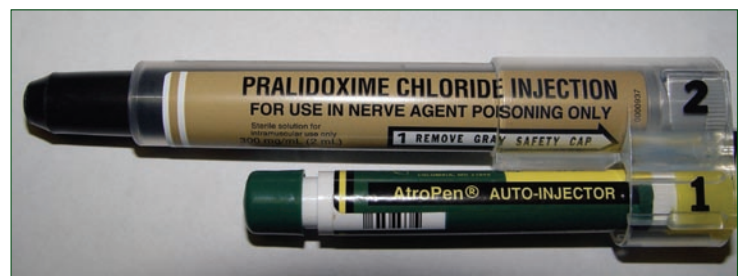






## WHAT IS CHEMICAL AGENT VX?

Chemical agent VX is a member of the organo-phosphate family and is similar to pesticides. A common misconception is that VX is a gas. In fact, VX is an oily liquid that is slightly heavier than water and evaporates 2,000 times more slowly. Under normal conditions, it is clear to straw-colored. VX was designed by the military to be a skin contact hazard. If skin contact is made with the oily liquid, it rapidly affects the nervous system by interfering with signals sent from the brain to vital organs. VX blocks the action of the enzyme acetylcholinesterase, causing messages from the brain to become short-circuited at the nerve endings. If left untreated, convulsions and death will result.



As a precaution, depot personnel responsible for handling chemical agent VX carry pharmaceutical antidote kits (pictured above) containing Atropine and 2-PAM Chloride. In combination, these substances counteract the symptoms of VX exposure. In addition, immediate skin decontamination can be accomplished by washing the skin surface in hot water at least three times with liquid soap and moderate scrubbing.





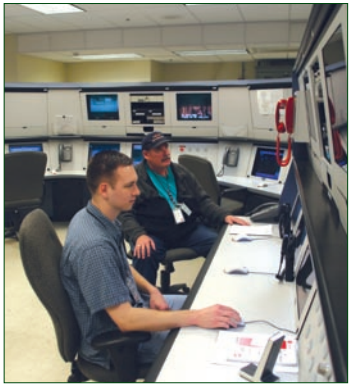
## WHAT IS BEING DONE TO ENSURE THE SAFETY OF THE SURROUNDING COMMUNITY?

The safety of the workers, the community and the environment is always top priority at the depot. The Newport team comprises workers who, because of their combined experience and intensive training, are experts in safely storing, handling and destroying chemical weapons. As these highly trained operators continue to safely neutralize the chemical agent, the risk to the local communities associated with continued storage is significantly reduced. A large portion of the work force at the depot is dedicated exclusively to VX stockpile security. These workers remain dedicated to the safe storage of the Newport stockpile until agent destruction operations are completed.

The chemical agent destruction process is performed within an area of the destruction facility often referred to as the neutralization or reactor bay. Workers safely monitor and control the agent destruction process occurring within the reactor bay from a control room utilizing sensors, monitors and video equipment. Areas such as the reactor

bay that have the potential for agent to be present are all ventilated and connected to carbon filtration units that scrub the air to remove particulates and pollutants. Air drawn from these locations is controlled, monitored and filtered before being released into the environment. The NECDF has numerous safety design features to ensure total containment of the chemical agent.

Monitoring air within the depot is a vital part of storing and destroying chemical agent. More than 96 chemical agent monitors are placed in and around the chemical agent destruction and storage facilities, with more than 4,300 samples taken daily. In addition, mobile monitoring stations are used to sample the air at selected locations within the depot boundary. Monitoring levels are very conservative and highly protective of worker and public health and safety. Because of their sensitivity, alarms will occasionally sound when triggered by non-agent interferences, such as perfume or hair spray.



*Many safeguards have been built into the NECDF, with emission controls being one of the most important. The specially designed air filters pictured here scrub the air to remove particulates and pollutants in order to meet state and federal clean air standards.*

## HOW IS NEWPORT DESTROYING THE VX?

Chemical agent VX is added to a hot sodium hydroxide and water solution in a reactor, where the mixture is heated and agitated for an extended period of time to break down the chemical composition of the VX, eliminating its lethal toxicity. The resulting byproduct of the neutralization process is a caustic wastewater, also known as hydrolysate. Once agent destruction is verified at an on-site laboratory, the wastewater is stored in intermodal containers awaiting further treatment. These tank containers (pictured right) are designed to store and transport the wastewater safely. These containers meet standards established by the International Organization for Standardization (ISO). Headquartered in Geneva, Switzerland, ISO sets standards for safe industrial practices worldwide.



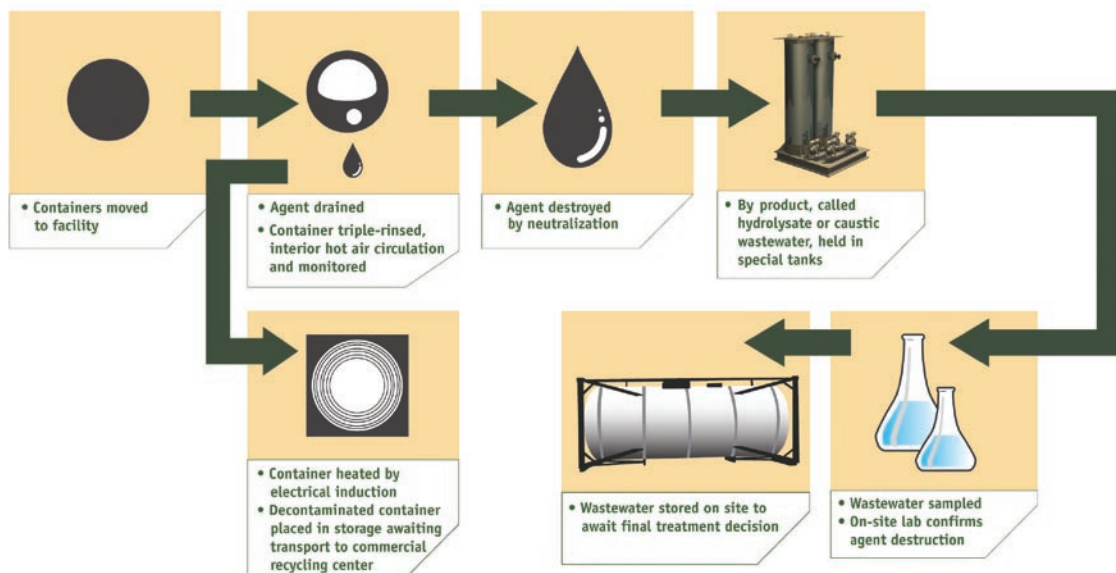
## HOW IS NEWPORT DECONTAMINATING EMPTY STEEL CONTAINERS?

The final step of the process is decontaminating the empty steel containers that once contained VX. The containers are placed inside a metal chamber. Using a process called electrical induction heating, the temperature of the chamber is increased to more than 1,300 degrees Fahrenheit. This allows the temperature of each container to be held at greater than 1,000 degrees Fahrenheit for a minimum of 15 minutes, which achieves complete decontamination.



*An NECDF employee helps guide a stacker operator as he safely maneuvers an intermodal container filled with hydrolysate. The intermodal containers are safely stored in the intermodal container storage area.*

## AGENT DESTRUCTION PROCESS

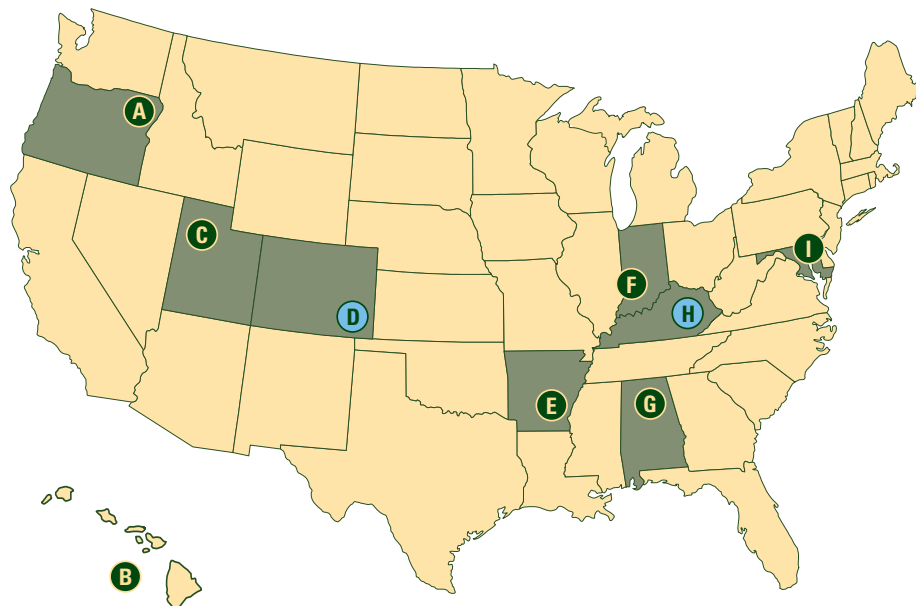




## U.S. CHEMICAL STOCKPILE SITES

*This map represents the eight chemical weapons stockpile sites in the United States. Indicated on the map key are the amount of chemical weapons that each site stores or stored and the type of disposal technology being used at each site.*

- A Umatilla Chemical Depot, Ore. - 12%\***  
Technology: Incineration—began disposal 2004
- B Johnston Atoll - 6%\***  
Technology: Incineration—completed disposal 2000
- C Deseret Chemical Depot, Utah - 44%\***  
Technology: Incineration—began disposal 1996
- D Pueblo Chemical Depot, Colo. - 8%\***  
Technology: Neutralization—design/construction underway
- E Pine Bluff Arsenal, Ark. - 12%\***  
Technology: Incineration—began disposal 2005
- F Newport Chemical Depot, Ind. - 4%\***  
Technology: Neutralization—began disposal 2005
- G Anniston Army Depot, Ala. - 7%\***  
Technology: Incineration—began disposal 2003
- H Blue Grass Army Depot, Ky. - 2%\***  
Technology: Neutralization—design/construction underway
- I Aberdeen Proving Ground, Md. - 5%\***  
Technology: Neutralization—completed disposal 2005



\* Approximate percentage of original U.S. stockpile

• The Colorado and Kentucky chemical stockpile destruction programs are managed by the Department of Defense's Assembled Chemical Weapons Alternatives program.

## WHY WAS NEUTRALIZATION SELECTED AT NEWPORT?

In 1994, the U.S. Army Alternative Technologies and Approaches Program was established in direct response to public concern about the incineration process selected for chemical weapons destruction at several other U.S. storage sites and originally proposed for Newport. The Newport facility and the Aberdeen Proving Ground-Edgewood Area in Maryland were the only two bulk agent-only stockpile sites, so a decision was made to pilot test alternatives to incineration at these sites. After receiving input from the community and conducting research and development, the Army and National

Research Council endorsed neutralization followed by secondary treatment of the waste product as the best alternative for the Newport stockpile.

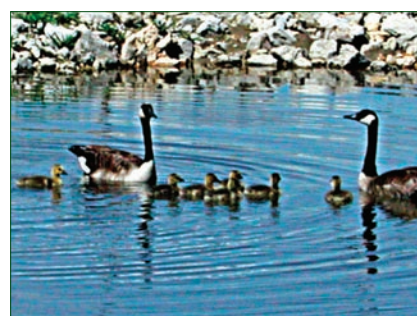
After the Sept. 11, 2001, terrorist attacks, the Army evaluated methods to expedite safe neutralization of the NECD stockpile. In 2002, the Army, with the agreement of state and federal

agencies and officials, implemented accelerated schedules for neutralizing the Indiana and Maryland stockpiles.



## WHAT WILL HAPPEN TO THE NEUTRALIZATION FACILITY AND DEPOT ONCE THE AGENT IS GONE?

Chemical agent disposal is the depot's final mission. Once disposal operations are complete, the neutralization facility will be decontaminated and processing areas dismantled as required by the environmental permits. The depot will undergo a closure process under the congressionally mandated Base Realignment and Closure (BRAC) program. In preparation for eventual closure, the Army is conducting a rigorous environmental program, focusing on soil and water remediation, in addition to maintaining and protecting natural resources for future use of the depot land. The Army will make a decision about disposition of the installation property as the BRAC process continues.



## WHAT HAPPENED TO THE FORMER NEWPORT VX PRODUCTION FACILITY?

The Army began dismantling the former Newport VX Production Facility in August 1998. One highlight of the demolition project involved removal of the flare tower in August 2003. Workers completed destruction of the former production facility in July 2006, nearly a year ahead of the Chemical Weapons Convention treaty schedule and without incident. This team will continue conducting decontamination operations for the pipe removed from the former production facility through 2008.

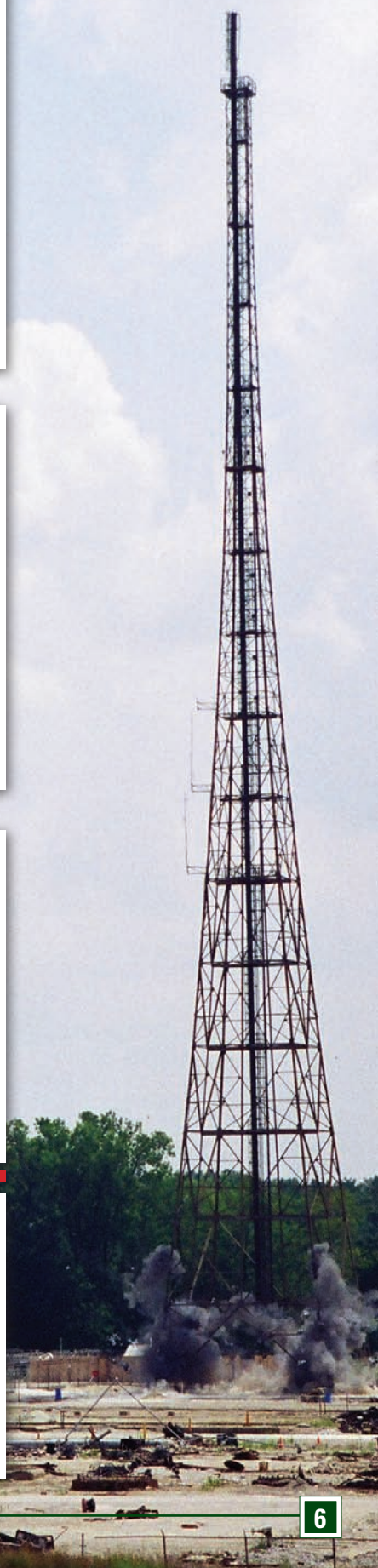
## WHAT IS CSEPP?

The Chemical Stockpile Emergency Preparedness Program (CSEPP) is a joint effort by the Department of Homeland Security, the Army and state and local response agencies to protect the community in the unlikely event of an accident involving chemical agent. CSEPP officials work with communities around stockpile sites to enhance emergency plans, inform the public of appropriate protective actions and provide chemical accident response equipment and warning systems for their area.

The Newport community CSEPP involves two states and five counties: Vermillion, Parke and Fountain counties in Indiana; and Vermillion and Edgar counties in Illinois. Each local agency is funded, staffed and trained to respond to a chemical emergency at the NECD.

## HOW CAN I GET INVOLVED?

The Army encourages citizen participation in plans and decisions about the destruction of the chemical agent stockpile and environmental remediation. The governor of Indiana has appointed a board of community members and state representatives to the Indiana Citizens' Advisory Commission (CAC) for chemical demilitarization, which represents the citizenry to the Army. CAC meetings are open to the public and people are encouraged to attend. Additionally, the depot commander has appointed a Restoration Advisory Board (RAB) to provide input on environmental issues. The RAB is co-chaired by an Army representative and a community spokesperson. Contact information is available through the Newport Chemical Stockpile Outreach Office.







## WHAT IS THE NEWPORT CHEMICAL STOCKPILE OUTREACH OFFICE?

Opened as a part of the U.S. Army Chemical Materials Agency (CMA), the outreach office is designed to provide citizens with a convenient “one-stop” source for information on the Army’s chemical agent storage and disposal programs. The office works closely with depot managers and workers, other storage depots and disposal facilities around the country, emergency management agencies, elected officials, community groups and others to provide a comprehensive outreach program. The outreach office is where the community can ask questions and get answers through various resources, as well as set up presentations and project briefings for a community group.



## WHERE CAN I LEARN MORE ABOUT THE U.S. ARMY CHEMICAL MATERIALS AGENCY?

CMA is the world leader in programs to store, treat and dispose of chemical weapons safely and effectively. The agency develops and uses technologies to safely store and eliminate chemical weapons while protecting its workers, the public and the environment. Visit CMA online at [www.cma.army.mil](http://www.cma.army.mil) or call (800) 488-0648 to learn more. CMA’s Web site provides recent updates and other information products about depot activities at all CMA sites.



## WHERE CAN I LEARN MORE?

Feel free to contact the outreach office at (866) 300-9034 (toll-free) or call NECD Public Affairs at (765) 245-4475. You may also stop by the outreach office at 306 S. Main St. in Clinton, Ind. In addition, inquiries and comments may be submitted to the outreach office staff at [newportcomments@gmail.com](mailto:newportcomments@gmail.com).

