

Pine Bluff Fall 2003

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The End of the Beginning

The year 2003 has had a series of firsts for the U.S. Army's chemical weapons disposal program. Notable among those firsts is the closure of the U.S. Army's first full-scale chemical weapons disposal facility, the Johnston Atoll Chemical Agent Disposal System (JACADS). The closure of JACADS is the end of the beginning.

The United States leads the world in disposing of chemical weapons. The Army began its mission of disposing of the entire U.S. stockpile of chemical weapons, with those located on a small island in the middle of the Pacific Ocean. Johnston Island is only a dot on the map. Though tiny, it is the site of great moments and historic firsts in the history of U.S. chemical weapons stockpile destruction.

From the time JACADS was built in 1986, thousands of men and women have lived and worked less than a mile from the chemical weapons stockpile. These dedicated men and women helped the Army achieve its goal of safe disposal of the stockpile.

On Nov. 29, 2000, JACADS completed disposal of the Johnston Island chemical weapons stockpile, and in early 2001, JACADS became the first U.S. facility to officially enter closure. This was accomplished while protecting the workers and the environment.

Johnston Island is home to hundreds of species of birds and fish. Working with the U.S. Environmental Protection Agency (EPA) and the U.S. Fish and Wildlife Service, JACADS has protected the environment while disposing of the chemical weapons. In fact, according to independent surveys and studies, the fish and bird populations are prospering. The coral reef that is Johnston Atoll is one of the few thriving reef systems in the world.

In May 2003, after finishing processing the secondary waste, the last furnace at JACADS was shut down—another first for JACADS and the program.

JACADS activities on Johnston Atoll will end in late 2003. (Editor's note: as of Aug. 22, 2003, JACADS closure was four weeks ahead of schedule).

Because each of the eight disposal sites in the continental U.S. eventually will go through closure, program personnel are paying close attention to



File Photograph

JACADS during chemical weapons disposal operations.

JACADS to ensure that valuable experience and insight from that site is shared.

The year 2003 is also a year of firsts for several other U.S. stockpile sites. Incorporating lessons learned from handling and disposing of chemical agent at JACADS and the Tooele Chemical Agent Disposal Facility in Utah, the Aberdeen Chemical Agent Disposal Facility in Maryland and the Anniston Chemical Agent Disposal Facility in Alabama both started agent disposal operations, and the Tooele Chemical Agent Disposal Facility, which started operations in 1996, completed its agent changeover and started its disposal campaign for nerve agent VX.

Also in 2003, the Army completed construction of a neutralization facility for bulk agent stored at the Newport Chemical Depot in Indiana while responsibility for full-scale pilot testing of neutralization technologies to destroy the assembled chemical weapons stockpiles at Pueblo Chemical Depot in Colorado and Blue Grass Army Depot in Kentucky was designated to the Department of Defense's Assembled Chemical Weapons Alternatives Program.

As 2003 closes out, all eight remaining chemical weapons stockpile sites are either in disposal operations, preparing to start operations or preparing to start construction of disposal facilities.

The experiences at JACADS, the Aberdeen Chemical Agent Disposal Facility and the Tooele Chemical Agent Disposal Facility are being used to improve the processes and facilities at the other sites as they

Through the efforts of highly-trained professionals, the use of proven technologies, and the oversight of the Army and various federal, state and local regulatory agencies, the PBCDF continues its mission of eliminating locally stored chemical munitions in a safe and environmentally sound manner.

Arsenal prepares for munitions disposal

Landmine destruction follows rocket disposal

This is the second in a series of articles providing an in-depth look at each chemical munition to be destroyed at the Pine Bluff Chemical Agent Disposal Facility.

In spring 2004, the Pine Bluff Chemical Agent Disposal Facility (PBCDF) begins destroying locally stored chemical munitions. Using the proven technology of incineration, highly-trained personnel at this state-of-the-art facility will safely destroy the four types of chemical agent and the three types of chemical munitions and containers stored at the Pine Bluff Arsenal. The agents scheduled for destruction are nerve agents GB (Sarin) and VX and mustard blister agents HD and HT. The types of munitions containing these agents are rockets, landmines and ton containers. After the rockets containing agent are destroyed, the facility focuses on landmines and finalizes destruction by destroying ton containers.

What is a M23 Landmine?

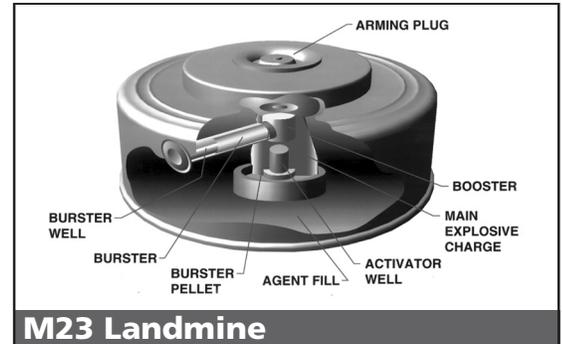
The second munition type planned for destruction at the PBCDF is the M23 landmine. The M23 landmine was created during World War I, to disperse nerve agent VX through an antipersonnel or antitank mine. The mine consists of a circular body, arming plug, booster, main explosive charge, adapter plate, activator well, burster pellet, burster well and burster charge. Mines, fuzes and activators are packaged in 16-gallon drums. Each drum contains three fuzes, three activators, three mines and packing material.

How will the landmines be destroyed?

The mines will be removed from a highly secure storage area where they have been safely stored in an igloo structure, and placed in an enhanced on-site container (EONC) for transport to the chemical agent disposal facility.

The EONC, a 10-ton, doubled-walled, cylindrical steel container transported by special tractor-trailers, has been flame-, puncture- and drop-tested to ensure it protects its contents, in this case the munitions, against external forces. The EONC containing the M23 landmines is delivered to the Container Handling Building for receipt and interim storage.

Once inside the Unpack Area (UPA), the EONC is monitored to ensure that no agent has leaked inside the EONC during transport or interim storage, before it is opened. Then, the mine drum pallet is removed from the EONC, the exterior of the drums



are checked for leaks and are loaded into a lift that transports the pallets to the second floor of the UPA. There, the pallet is placed on the floor in front of a drum conveyor where operators perform a second external check for leaks before removing the banding and unpacking the pallet. The explosives (activators and fuzes) are packed separately in the mine drum above the mine bodies and are placed in a cardboard mine referred to as a Mine Component Container or MCC.

The Mine Machine (MIN) is designed to punch and drain the agent from mines and the central burster is accessed to facilitate burning in the Deactivation Furnace System (DFS). The MIN consists of an orientation station, punch and drain station, trolley transfer station and the Fuzewell Adaptor Removal Station (FARS).

The mine is received on the input conveyor from the Explosive Containment Vestibule and moves along the conveyor to the orientation station inside the Explosive Containment Room (ECR). At this point, the mine is rotated and positioned in the yoke to determine the precise location to punch while avoiding the side burster well. The ECR, a specially-designed room with 28-inch thick walls made of concrete and steel rebar, is designed as an additional safeguard to contain the effects of any possible, though unlikely, detonation of the munition.

After the mine has been properly oriented, the mine is lifted from the horizontal to the vertical position. The punch and drain station secures the mine while it is punched and drained of agent. Once the agent drain cycle is complete, verification is performed to ensure that approximately 95 percent of the agent was drained.

After the drain cycle is complete, the punch and drain station releases the mine and it is lowered

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Woloszyn assumes command of arsenal

Department of the Army photo



Col. Thomas R. Woloszyn, commander, Pine Bluff Arsenal

In a traditional change-of-command ceremony on Aug. 8, Col. Thomas R. Woloszyn became the 31st commander of Pine Bluff Arsenal. His command follows that of Col. Mark Hensheid, who has retired from the Army and moved to Utah.

Woloszyn, a New York native, was commissioned

a second lieutenant in the Chemical Corps after graduating from Pennsylvania State University in 1980 with a Bachelor of Science degree in biochemistry. He earned a Master of Science in analytical chemistry from the same school in 1992.

Prior assignments include a tour as commander of Umatilla Chemical Depot in Hermiston, Oregon, from July 1999 to July 2001, participation in Operation Enduring Freedom in Afghanistan and a recent assignment in the Middle East as a participant in Operation Iraqi Freedom.

“In 2004, we will see the start of the chemical stockpile disposal operation, a task that will require team effort. History reminds us that this arsenal has experienced success in the demilitarization with the BZ mission and I am confident that we again will have a successful and safe operation,” he said.

Woloszyn is married to the former Karen Sogard of Duluth, Minn. The couple has two sons, Christopher and John.

PBCDF Four Cornerstones:

- **Emergency Preparedness**
- **Environmental Stewardship**
- **Safe and Secure Storage**
- **Proven Technology and Approaches**

Bayha takes command of Pine Bluff Chemical Activity

Department of the Army photo



Lt. Col. James "Jim" Bayha, commander, Pine Bluff Chemical Activity

The Pine Bluff Chemical Activity welcomed its fifth commander June 18, as Lt. Col. James "Jim" Bayha assumed command.

A native of Bay Shore, N.Y., Bayha graduated from The Citadel in Charleston, S.C., with a degree in biology, and was commissioned as a second lieutenant in the U.S.

Army Chemical Corps in May 1984. He received a master's in international relations from Troy State University, Ala., in 1993.

Bayha's previous assignments include participation in operations Desert Shield/Storm, Provide Comfort

and Southern Watch in the Middle East; Operation United Shield in Somalia; and Operation Enduring Freedom in Afghanistan. In addition to other military honors, Bayha has been awarded the bronze star.

The new commander is married to the former Renee Crawford of Florence, S.C. They have a daughter, Kelly, and a son, Zachary.

Bayha said he is pleased to continue the work toward a safer environment for the employees of the arsenal and residents of Pine Bluff.

“I look forward to working with everyone to make sure that the demilitarization projects are done safely, effectively and efficiently. I am honored and proud to come to Pine Bluff and I want to continue the fine relationship with the community,” he said.

End of the Beginning *Continued from page 1*

Photo by H. Ward Maynard



Taking down the JACADS facility.

prepare to come on-line. The Army constantly strives to update their proven safe disposal methods through research, new technology and the experiences of each disposal site. Working with agencies such as the EPA and the National Research Council, the Army ensures that the community and the environment are protected.

This year, 2003, has been a banner year for the Army's chemical weapons disposal program. The firsts have been many, and with JACADS completing closure, the beginning of U.S. chemical weapons disposal has truly come to an end.

WELL DONE!

Landmine destruction follows rocket disposal

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from the vertical position to the horizontal position (upside down) and placed on the trolley. The trolley assembly moves the mine to the FARS.

At the FARS, the fuzewell adaptor is unscrewed to allow the central burster to separate from the mine, thus promoting burning rather than explosion of the burster in the DFS. Then, the trolley is driven forward to the DFS feed gate.

As the cardboard mines containing the fuzes and activators enter the orientation station, the punch and drain station is bypassed and the MCC is sent directly to the DFS feed gate. The DFS destroys residue agent and thermally decontaminates the remaining mine pieces.

To ensure the utmost protection of personnel and the environment, three monitoring systems will be in place and work in concert, offering state-of-the-art protection for all. Slated to run throughout the facility are Automatic Continuous Air Monitoring Systems (ACAMS) which monitor the facility for agent and exhaust to confirm that no harmful emissions are released into the

environment. Also in place and operational are Continuous Emission Monitoring Systems (CEMS) to validate the efficient operation of the system in regard to non-agent emissions such as carbon monoxide and to confirm that emissions are within state-permitted levels. For further protection, the Depot Area Air Monitoring Station (DAAMS) collects samples from the atmosphere within and around the plant, which are analyzed in the on-site laboratory. These DAAMS units provide historical records of the environment and function as backup and verification of the ACAMS.

Through the efforts of highly-trained professionals, the use of proven technologies, and the oversight of the Army and various federal, state and local regulatory agencies, the PBCDF continues its mission of eliminating locally stored chemical munitions in a safe and environmentally sound manner. Many of your friends, neighbors and family members comprise the PBCDF team and are active participants in the effort to safely eliminate the chemical weapons stored at the depot. For additional information, call the Outreach Office for Chemical Disposal at (870) 247-2025.