

Monthly Status Briefing

August 2013



Blue Grass Chemical Agent-Destruction Pilot Plant



Program Executive Office
Assembled Chemical Weapons Alternatives



BGCAPP
Blue Grass Chemical
Agent-Destruction Pilot Plant

www.peoacwa.army.mil



A PARTNERSHIP FOR SAFE CHEMICAL WEAPONS DESTRUCTION

Project Background

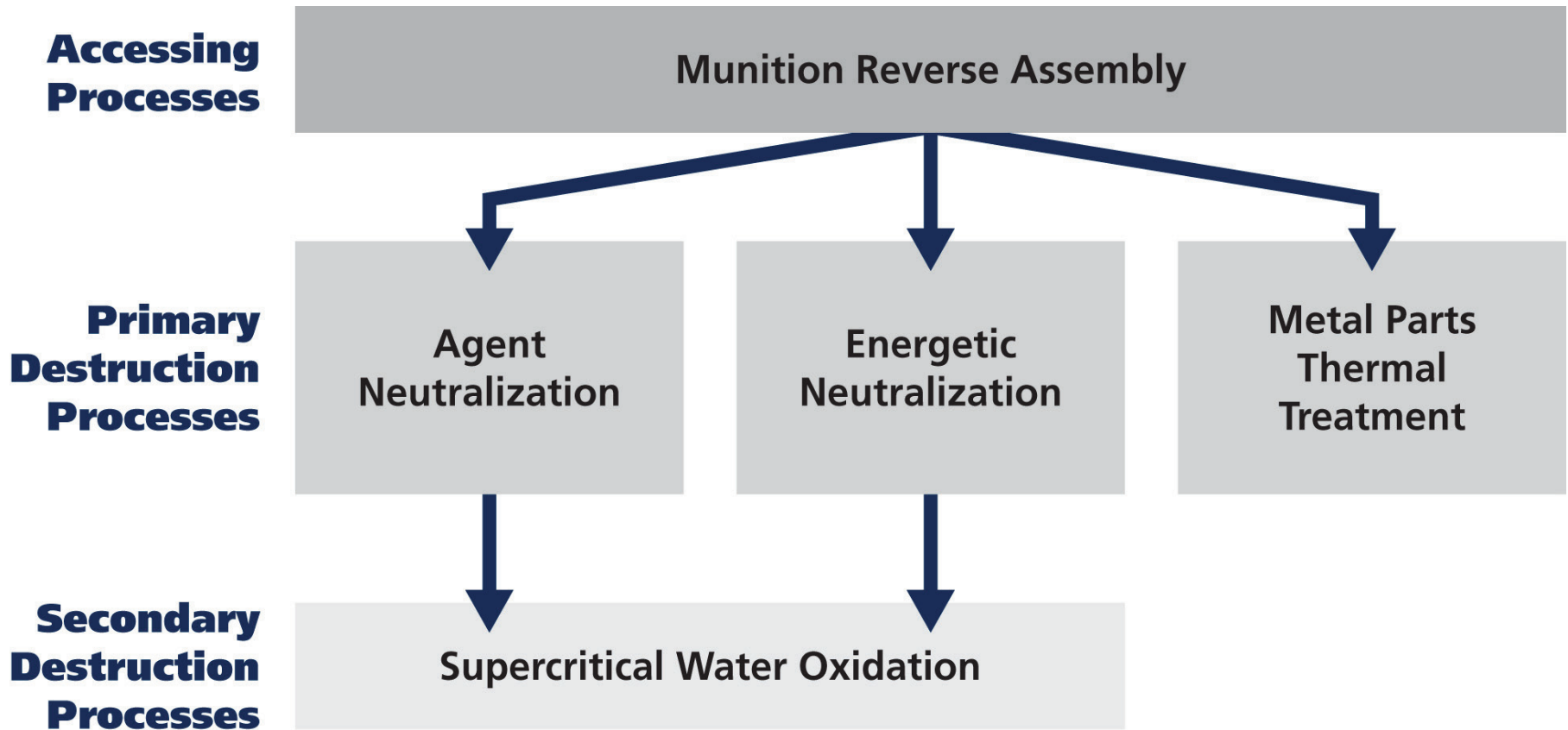


- The Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) will safely destroy 523 tons of chemical agent in rockets and artillery projectiles stored at the Blue Grass Army Depot in Richmond, Ky.
- The technology selected by the Department of Defense to destroy the Blue Grass chemical weapons stockpile is neutralization followed by supercritical water oxidation (SCWO).
- The Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA) Program, headquartered at Aberdeen Proving Ground, Md., is responsible for managing all aspects of the safe and environmentally sound destruction of the chemical weapons stockpiles in both Kentucky and Colorado.
- The Bechtel Parsons Blue Grass Team, a joint venture of Bechtel National, Inc., and Parsons Government Services Inc., along with teaming partners URS Corporation, Battelle, General Atomics and GP Strategies Corporation, is the systems contractor selected to design, build, systemize, pilot test, operate and close BGCAPP.

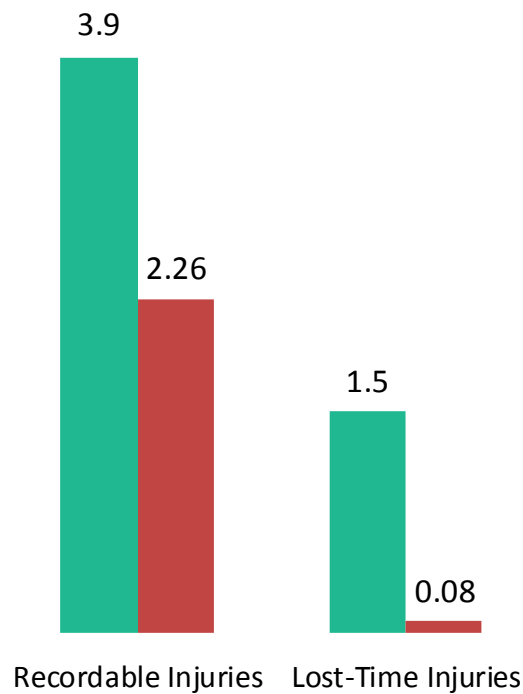


Destruction Technology

Neutralization followed by supercritical water oxidation will be used to destroy the Kentucky stockpile.



Safety



■ Construction Industry
■ Bechtel Parsons
(12-month rolling rate)
Accidents per 200,000 job hours

- Occupational Safety and Health Administration Voluntary Protection Program Star Status site
- Lost-time injury rate is **95 percent lower** and recordable injury rate is **42 percent lower** than industry average
- As of July 31, 2013, the project has completed 1,591,830 hours and 263 days without a lost-time accident



Continued Safety Focus

- **Safety remains a core value of the project workforce**
- **Workforce committed to a *Brother's Keeper* mindset**
 - Culture of mentoring one another, remaining vigilant and respectfully challenging unsafe workplace behaviors
- **Management and employees focused on goal of *Zero Accidents*:**
 - Communicating proper construction techniques, need for continuous improvement and incorporating lessons learned
 - Communicating importance of pre-planning and discussing daily work activities; identifying potential safety hazards before work begins



Current Project Staffing

- **Total project employment—1,270**
- **Richmond, Ky.—1,259**
 - Nonmanual—587
 - Craft—672
 - Local hires—64 percent
- **Other locations—11**
 - San Diego, Calif.
 - Columbus, Ohio
 - Reston, Va.

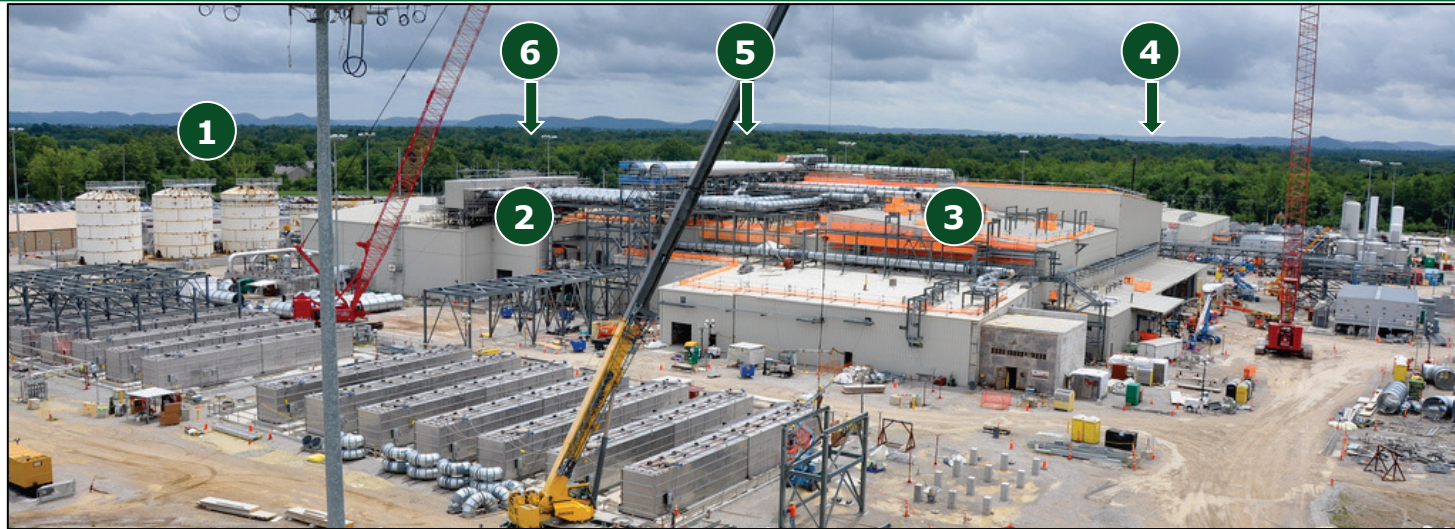


The BGCAPP workforce includes 672 local union building & construction trades craft workers.

Economic Impact

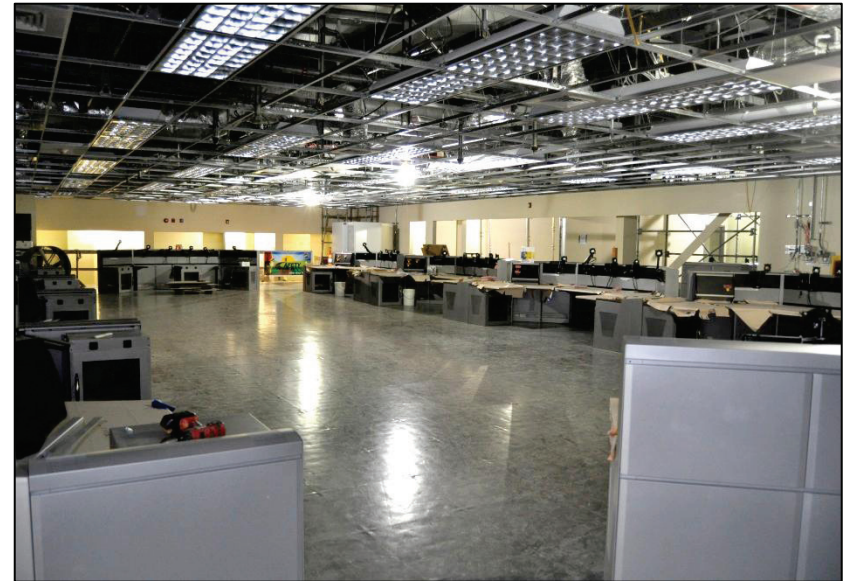
- **Acquisitions to date**
 - \$111 million spent with Kentucky companies
 - \$66.7 million spent in Madison and surrounding counties
- **Payroll to date (includes nonmanual and craft)**
 - \$458 million of local payroll paid

Work in Progress



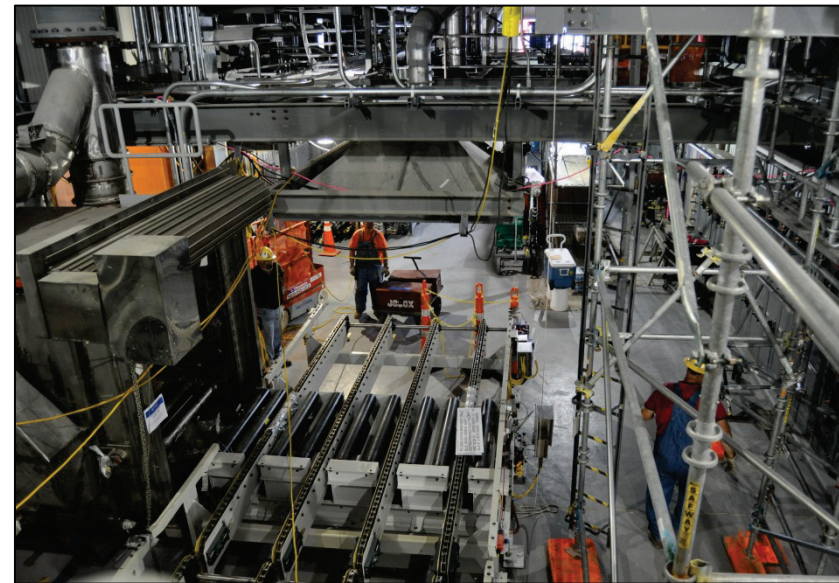
- 1 Hydrolysate Storage Area**
 - Fabricating and erecting tanks
- 2 Control and Support Building (CSB)**
 - Systemizing heating, ventilation and air conditioning (HVAC)
 - Electrical, piping and fire detection systems
 - Vinyl flooring installation
- 3 Munitions Demilitarization Building (MDB)**
 - Reverse assembly equipment installation
 - HVAC, electrical, piping, mechanical systems
 - MDB filter area filter housings and stacks
- 4 Utility Building**
 - Exterior pipe rack support steel
 - Interior electrical and piping systems
 - Boiler room infrastructure
- 5 Supercritical Water Oxidation (SCWO) Process Building** (not visible in photo)
 - Exterior siding and internal electrical systems
 - SCWO effluent process tank area foundation
- 6 Laboratory Building** (not visible in photo)
 - Systemization complete, personnel occupancy

Control and Support Building (CSB)



Workers inspect heating, ventilation and air conditioning ductwork (above left) atop the CSB roof. Inside the CSB, the main control room operator consoles (above right) are installed and permanent room lighting installations are underway. Once complete, the CSB will house the control room and the integrated control system used to operate the plant.

Munitions Demilitarization Building (MDB)



Ironworkers erect ductwork support steel (above left) around the MDB filter area's filter housing units. During plant operations, the MDB's negative air pressure system called cascading ventilation, draws fresh air into the building. The air returns to the atmosphere only after it passes through a series of carbon filter units that scrub the air as it passes through. Mechanical conveyor system installations continue inside the Metal Parts Treater cooling room. During plant operations, empty projectile bodies will be cooled on the conveyors following thermal decontamination inside the Metal Parts Treater. The MDB is where the chemical weapons will be disassembled, the explosives removed and the agent neutralized.

Supercritical Water Oxidation (SCWO) Process Building and Hydrolysate Storage Area (HSA)



Platforms and stairways reside atop three HSA tanks (above left) as work continues on two additional tanks. Meanwhile at the SCWO Process Building, ironworkers and millwrights place a SCWO reactor module atop the building's foundation (above right). During operations, agent and energetic hydrolysates, byproducts of the neutralization process, are emptied into HSA holding tanks once agent destruction is verified. The hydrolysate is transferred to the SCWO Process Building which houses the reactors where agent and energetic hydrolysates will be subjected to very high temperatures and pressures to destroy their organic content.

Utility Building (UB)



A pipefitter secures a section of piping (above left) for work inside the UB boiler room. Outside the UB, a utility pipe rack (above right) now spans to the Munitions Demilitarization Building. Once complete, the UB will house equipment to produce steam, compressed air, chilled water and hot water for operations.

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