

# Monthly Status Briefing

*December 2012*



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](http://www.peoacwa.army.mil)



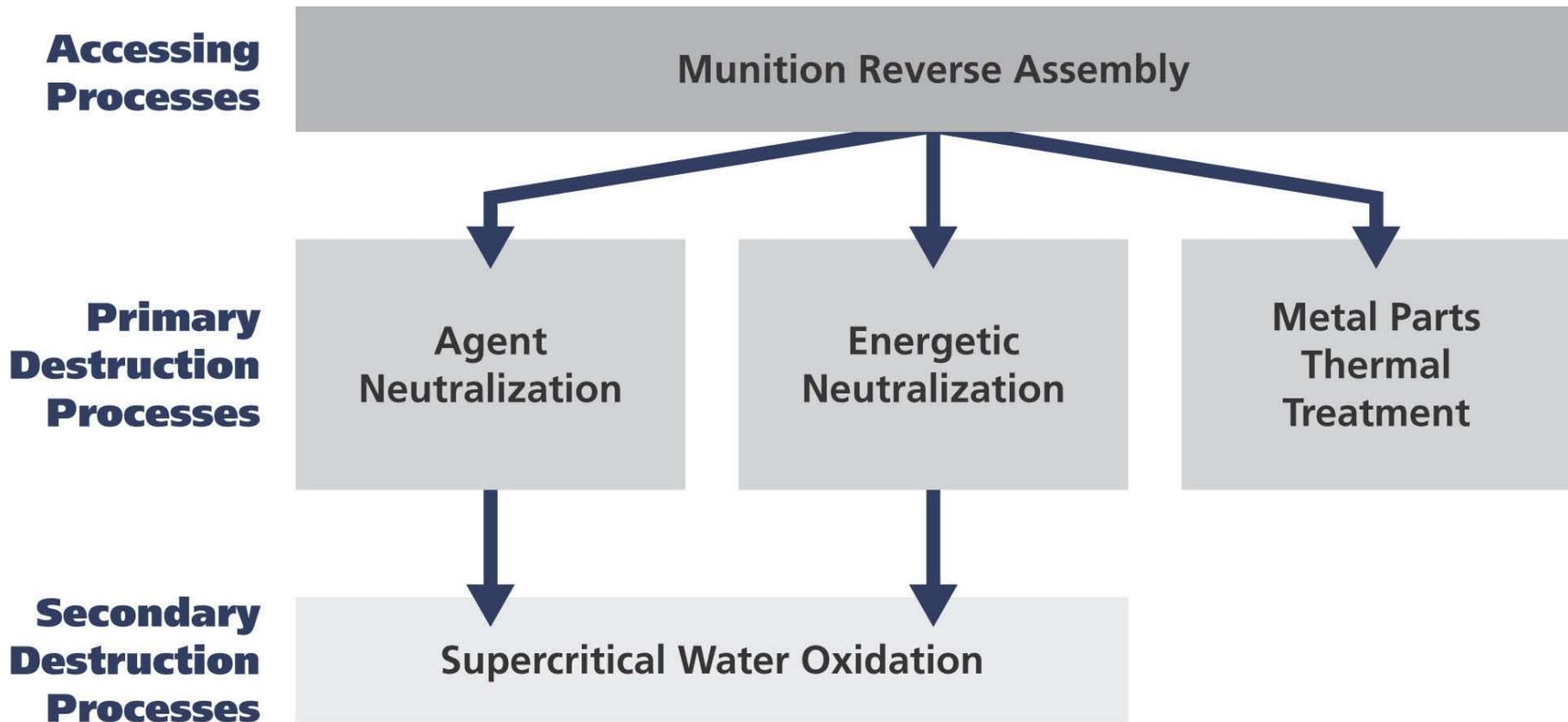
**A PARTNERSHIP FOR SAFE CHEMICAL WEAPONS DESTRUCTION**

# Project Background

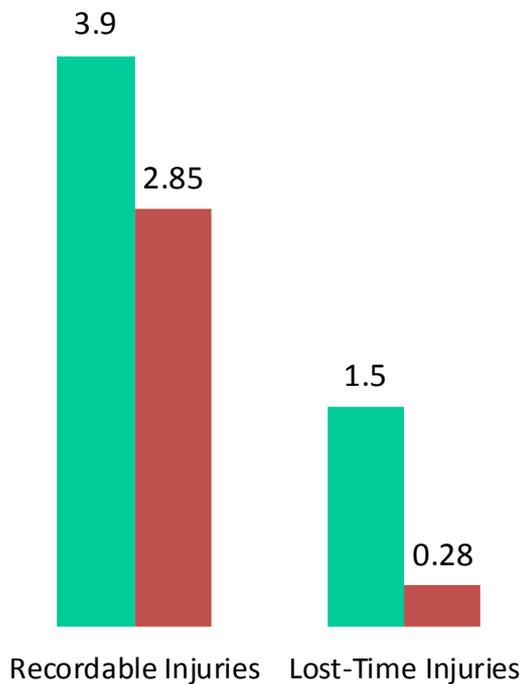
- The Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) will safely destroy 523 tons of chemical agent in rockets and artillery projectiles stored at the Blue Grass Army Depot in Richmond, Ky.
- The technology selected by the Department of Defense to destroy the Blue Grass chemical weapons stockpile 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 **81 percent lower** and recordable injury rate **27 percent lower** than industry average
- As of November 30, 2012, the project has completed 16,500 hours and 20 days without a lost-time accident



# Continued Safety Focus

- Safety remains a core value of the project workforce
- Management and employees focusing on goal of *Zero Accidents*:
  - Communicating proper construction housekeeping, its relationship to safety excellence and need for continuous improvement
  - Communicating importance of pre-planning and discussing daily work activities; identifying potential safety hazards before work begins
- Instilling a *Brother's Keeper* mindset to mentor one another, remain vigilant and respectfully challenge unsafe workplace behaviors



# Current Project Staffing

- **Total project employment—1,055**
- **Richmond, Ky.—996**
  - Nonmanual—523
  - Craft—473
  - Local hires—57 percent
- **Other locations—59**
  - Pasco, Wash.
  - San Diego, Calif.
  - Columbus, Ohio
  - Frederick, Md.



There are 473 craft workers at BGCAPP representing 10 different building & construction trades.

# Economic Impact

- **Acquisitions to date**

- \$103.3 million spent with Kentucky companies
- \$63.2 million spent in Madison and surrounding counties

- **Payroll to date (includes nonmanual and craft)**

- \$383 million of local payroll paid
- \$427 million more to be paid during the remainder of project

# Construction Work in Progress



- 1 Control and Support Building (CSB)**
  - Electrical, piping and fire detection systems
  - Heating, ventilation and air conditioning (HVAC)
  - Facility control system cabinets and infrastructure
- 2 Munitions Demilitarization Building (MDB)**
  - Structural steel, paneling, protective coatings
  - HVAC, electrical, piping, mechanical systems
  - MDB filter area foundations and filters
- 3 Utility Building**
  - Exterior pipe rack support steel
  - Interior electrical and piping systems
  - Nitrogen generation plant equipment
- 4 Supercritical Water Oxidation (SCWO) Process Building** (not visible in photo)
  - Exterior siding and pipe rack support steel
- 5 Laboratory Building** (not visible in photo)
  - Construction and systemization complete
  - Systemization and Laboratory personnel occupancy

# Control and Support Building (CSB)



Electricians install electrical panel box wiring (above left) inside the CSB. Outside the CSB, electrical cable tray and conduit (above right) have been installed within support steel which surrounds the building. The tray and conduit will house the electrical cable needed to power the CSB during plant operations. Once complete, the CSB will house the control room and the integrated control system used to operate the plant.

# Munitions Demilitarization Building (MDB)



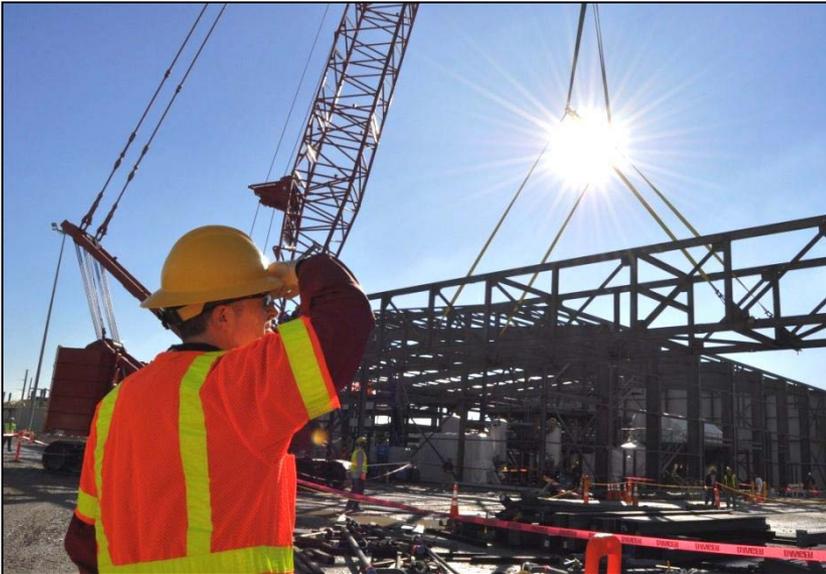
Structural steel and exterior paneling (above left) installation continues around the MDB energetics neutralization system equipment. Next to the energetics neutralization equipment rooms, a craft worker welds metal deck plating (above right) together. The MDB is where the chemical weapons will be disassembled, the explosives removed and the agent neutralized.

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



SCWO Process Building exterior siding installation (above left) continues. At the HSA, workers have erected the first of five large hydrolysate storage tanks (above right) and prepare to install the dome. 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)



Workers safely lift and install a 100-foot, 40,000-pound section of pipe rack steel (above left) between the Supercritical Water Oxidation Process Building and the UB. The pipe rack will carry utilities for plant operations. Adjacent to the UB, workers have installed the nitrogen generation plant equipment and began excavations (above right) for future support infrastructure. Once complete, the UB will house equipment to produce steam, compressed air, chilled water and hot water for operations. The nitrogen generation plant will supply nitrogen, an inert and non-flammable gas, during plant operations to maintain a combustion-free environment.

# Blue Grass Chemical Agent-Destruction Pilot Plant

