



Blue Grass Chemical Agent-  
Destruction Pilot Plant

# Monthly Status Briefing

*August 2012*



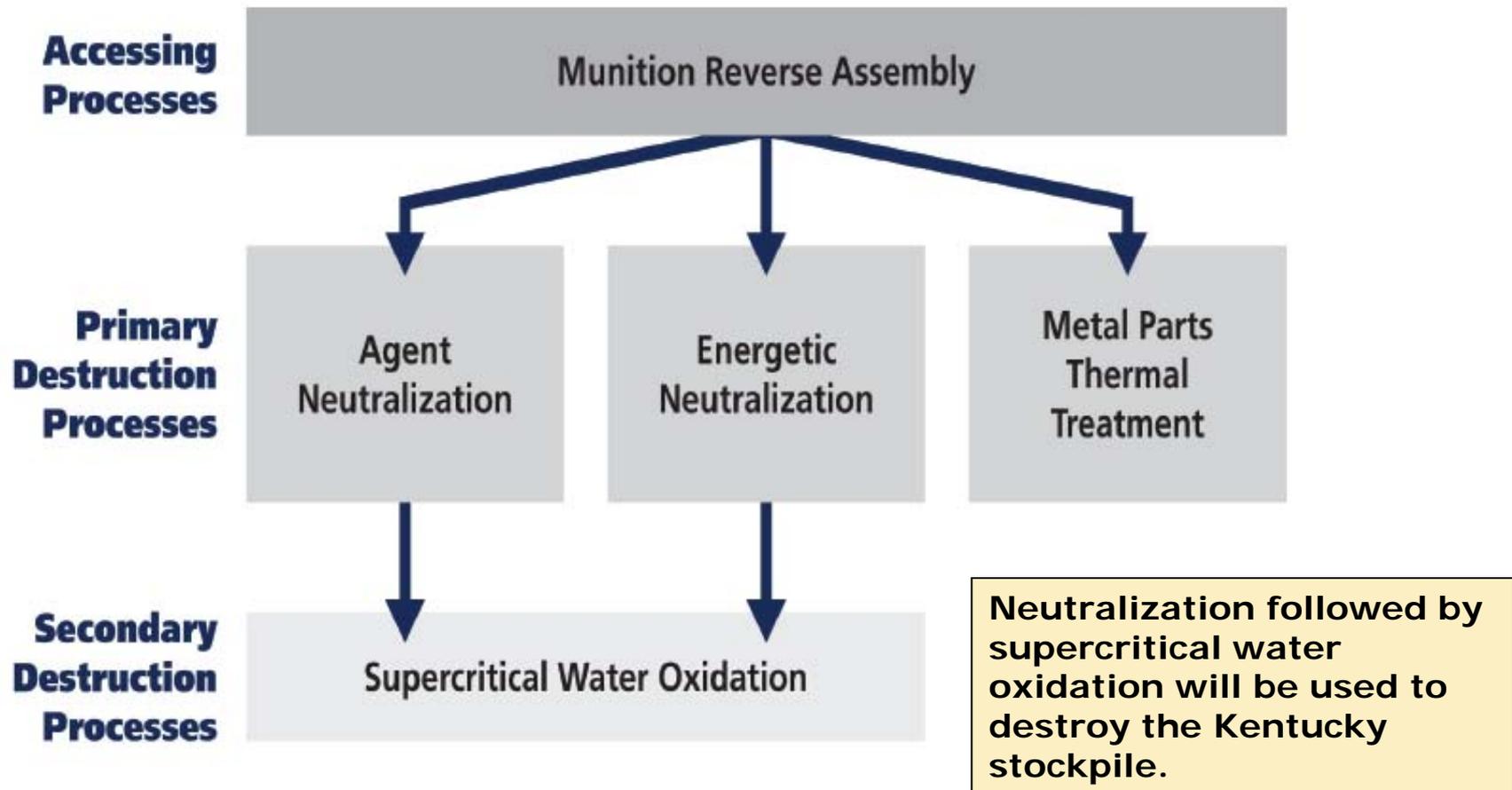
**BGCAPP**

# Project Background

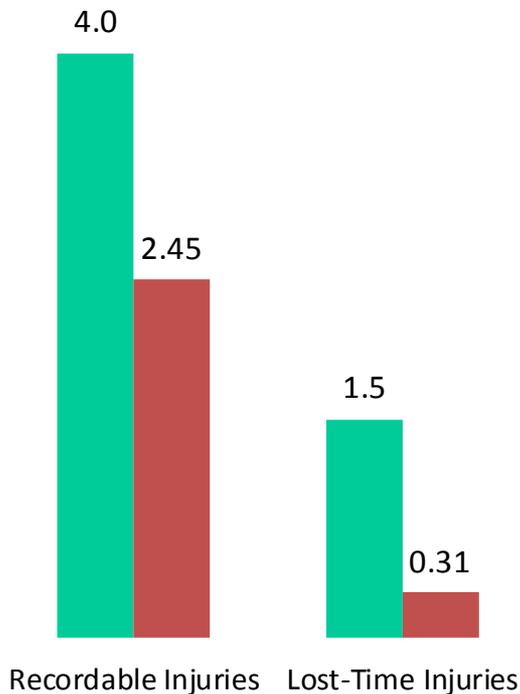
- The Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) will safely destroy 523 tons of chemical agent in rockets and artillery projectiles stored at the Blue Grass Army Depot in Richmond, Ky.
- The technology selected by the Department of Defense to destroy the Blue Grass chemical weapons stockpile is neutralization followed by supercritical water oxidation (SCWO).
- The Assembled Chemical Weapons Alternatives (ACWA) Program, headquartered at Aberdeen Proving Ground, Maryland, 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



# Safety



- Occupational Safety and Health Administration Voluntary Protection Program Star Status site
- Lost-time injury rate is **79 percent lower** and recordable injury rate **39 percent lower** than industry average
- As of July 31, 2012, the project has completed 162,803 hours and 47 days without a lost-time accident

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



# Continued Safety Focus

- **Safety remains a core value of the project workforce**
- **Management and employees re-focusing on goal of *Zero Accidents*:**
  - Communicating and re-emphasizing proper construction housekeeping, its relationship to safety excellence and need for continuous improvement
  - Communicating and re-emphasizing importance of pre-planning and discussing daily work activities; and identifying potential safety hazards before work begins
  - Communicating and reviewing recent Occupational Safety & Health Administration recordable injuries and re-emphasizing employees' roles and responsibilities to follow work procedures and analyze for potential hazards before work begins

# Current Project Staffing

- **Total project employment—977**
- **Richmond, Ky.—916**
  - Nonmanual—456
  - Craft—460
  - Local hires—59 percent
- **Other locations—61**
  - Pasco, Wash.
  - San Diego, Calif.
  - Columbus, Ohio
  - Frederick, Md.



The Blue Grass Chemical Agent-Destruction Pilot Plant workforce in Richmond is comprised of 59 percent local hires.

- **Acquisitions to date**

- \$85.9 million spent with Kentucky companies
- \$47.9 million spent in Madison and surrounding counties

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

- \$348 million of local payroll paid
- \$462 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)
- Instrument rack room flooring

## 2 Munitions Demilitarization Building (MDB)

- Structural steel, paneling, protective coatings
- HVAC, electrical, piping, mechanical systems
- MDB filter area foundations

## 3 Utility Building

- Exterior pipe rack support steel
- Concrete pads for exterior utilities
- Interior electrical and piping systems

## 4 Supercritical Water Oxidation (SCWO) Process Building (not visible in photo)

- Structural steel, process tanks and equipment

## 5 Laboratory Building (not visible in photo)

- Exterior siding, architectural trim and railings

# Control and Support Building (CSB)



A craft worker cuts piping (above left) for installation inside the CSB. Elsewhere in the CSB, workers are installing overhead electrical conduit (above right). Once complete, the CSB will house the control room and the integrated control system used to operate the plant.

# Munitions Demilitarization Building (MDB)



**BGCAPP craft workers completed the MDB's final concrete placement (above left) over the building's unpack area in late July. During plant operations, the unpack area is where chemical weapons will be received and unpacked before the automated destruction process begins. Inside the MDB, craft workers are installing support steel inside the MDB's steel-laced concrete rooms. The MDB is where the chemical weapons will be disassembled, the explosives removed and the agent neutralized.**

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



A craft worker compacts soil around the recently completed HSA concrete foundation (above left). At the SCWO Process Building, craft workers continue welding and fastening together the building's structural steel frame (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)



Inside the UB, a BGCAPP craft worker fastens electrical components (above left) to large water-chilling units. Adjacent to the UB, craft workers install reinforcing steel (above right) to prepare for future nitrogen generation plant concrete foundation placements. During plant operations, nitrogen, an inert, non-flammable gas, will be used to maintain a combustion-free environment during the chemical weapons destruction process. Once complete, the UB will house equipment to produce steam, compressed air, chilled water and hot water for operations.

# Blue Grass Chemical Agent-Destruction Pilot Plant

