# Monthly Status Briefing

## *February 2012*




BGCAPP

Blue Grass Chemical Agent-Destruction Pilot Plant

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.

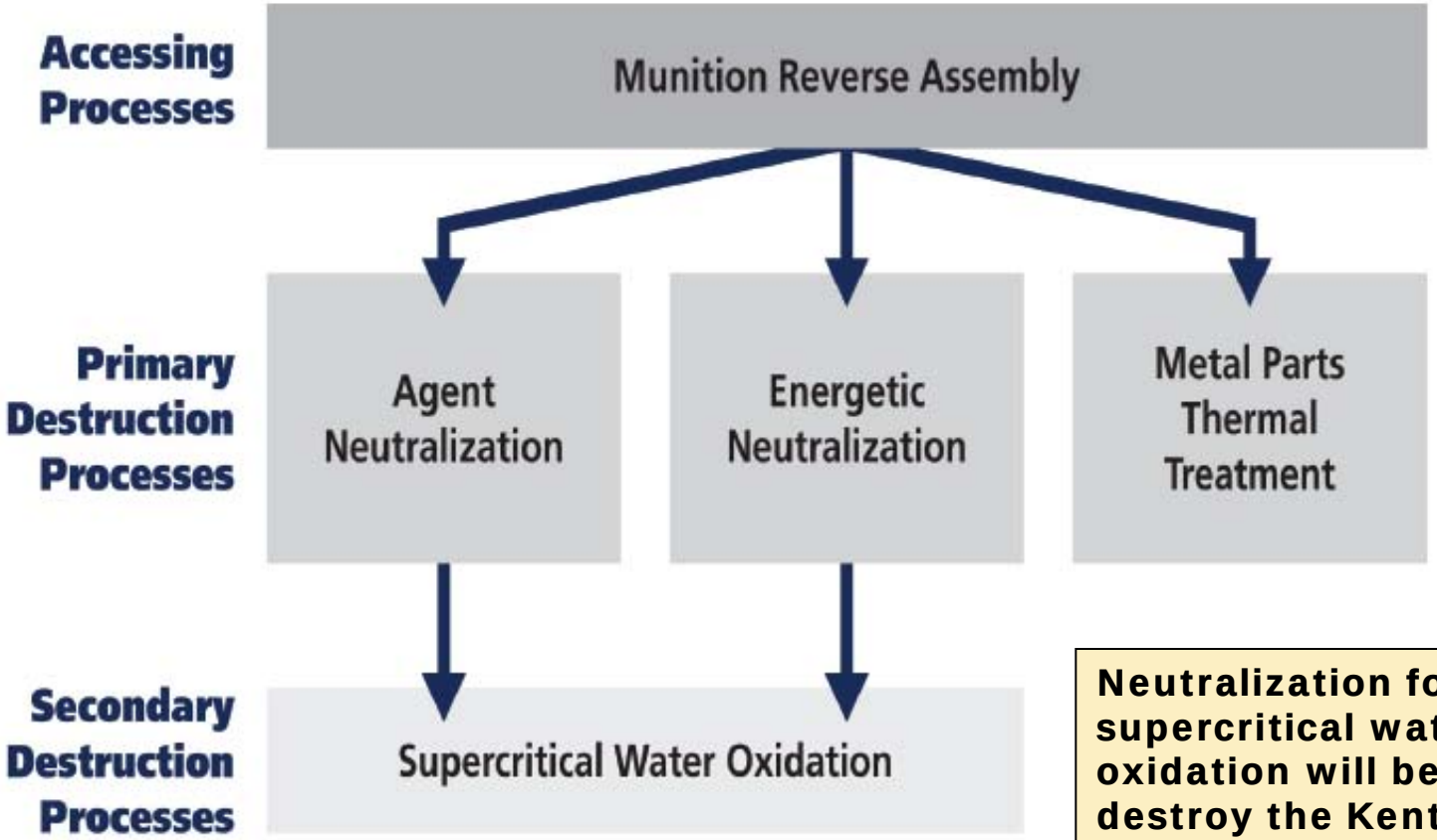
- The technology selected by the Department of Defense to destroy the Blue Grass chemical weapons stockpile is neutralization followed by supercritical water oxidation (SCWO).

- 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 Infrastructure and Technology Group, along with teaming partners URS Corporation, Battelle Memorial Institute, General Atomics and General Physics, is the systems contractor selected to design, build, systemize, pilot test, operate and close BGCAPP.

# Destruction Technology

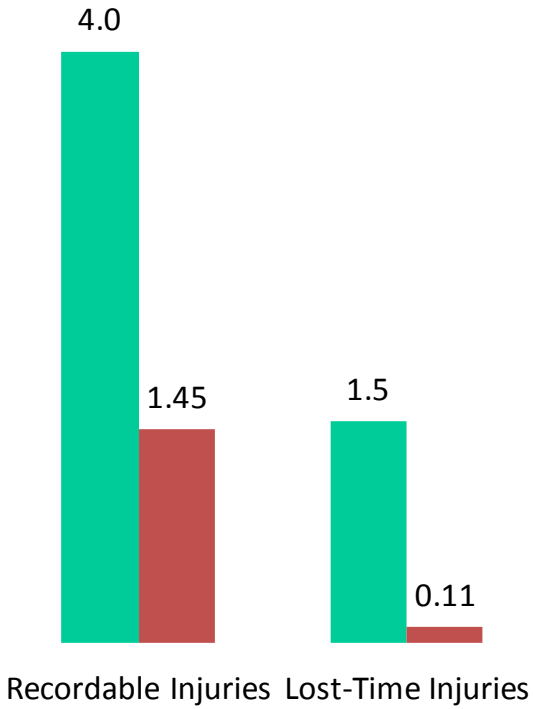





**Neutralization followed by supercritical water oxidation will be used to destroy the Kentucky stockpile.**

# Safety






- OSHA Voluntary Protection Program Star Status site
- Lost-time injury rate **93 percent lower** and recordable injury rate **64 percent lower** than industry average
- As of January 31, 2012, the project has completed 1,642,467 hours and 328 days without a lost-time accident

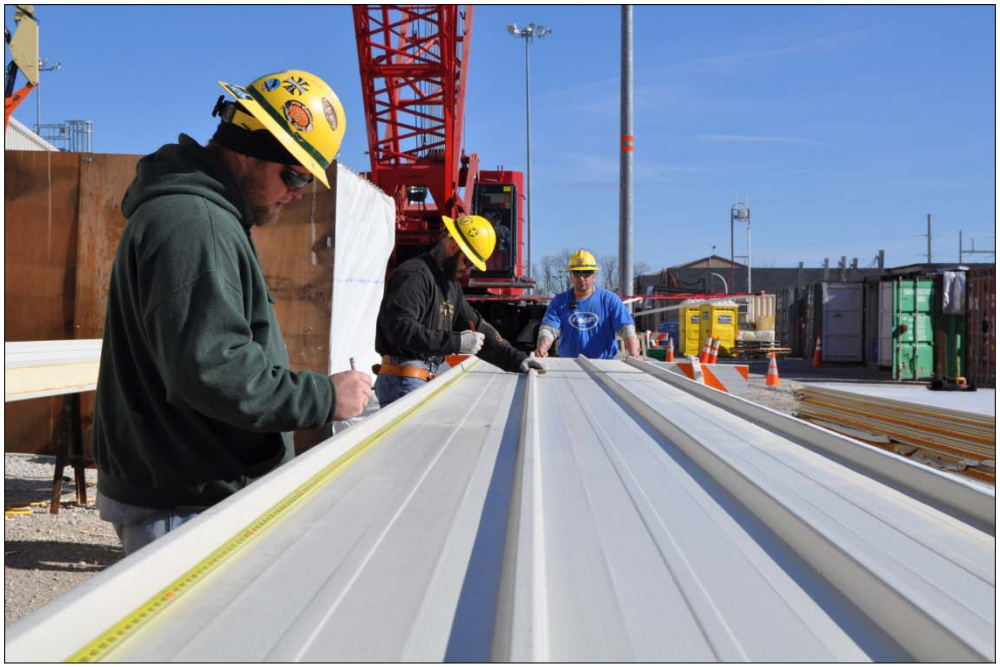
DEDICATED TO ACCIDENTS SAFETY EXCELLENCE

VPP Voluntary Protection Programs An OSHA Cooperative Program

# Current Project Staffing



- **Total project employment—870**
- **Richmond, KY—796**
  - Nonmanual—430
  - Craft—366
  - Local hires—56 percent
- **Other locations—74**
  - Pasco, WA
  - San Diego, CA
  - Columbus, OH
  - Frederick, MD



**With 796 workers now in Richmond, BGCAPP has maintained more than a 50-percent local hire rate.**

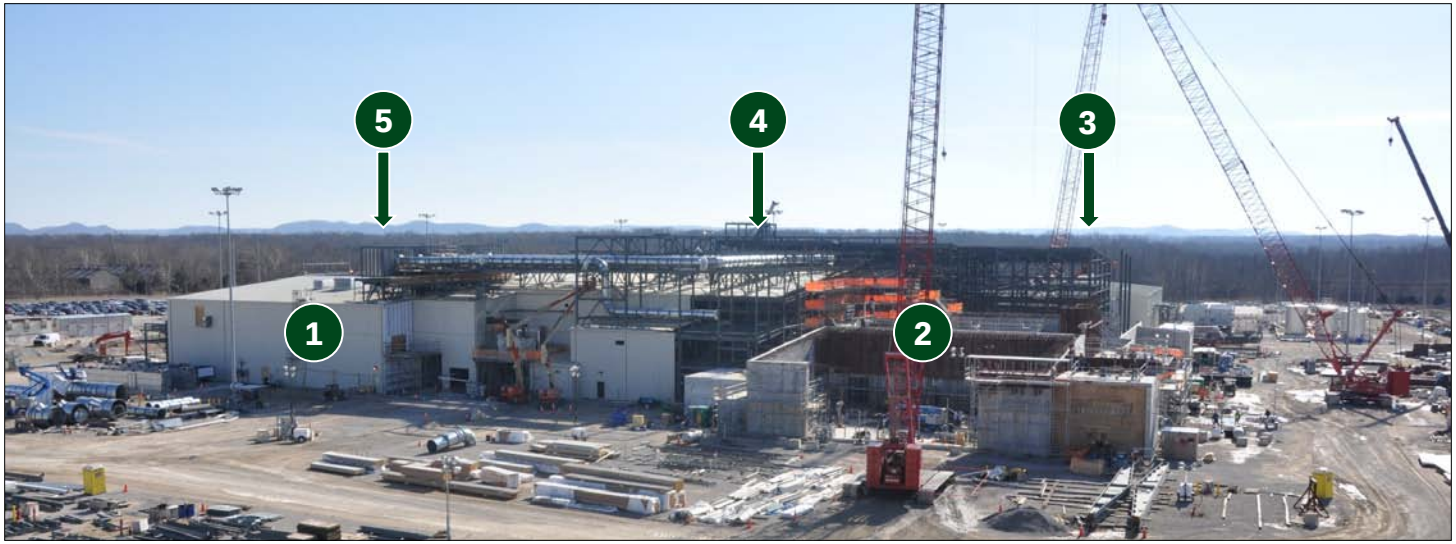
# Economic Impact



- **Acquisitions to date**
  - $78.2 million spent with Kentucky companies
  - $46.3 million spent in Madison and surrounding counties
- **Payroll to date** **(includes non-manual and craft)**
  - $300 million of local payroll paid
  - $510 million more to be paid during the remainder of project

# Construction Work in Progress






**1 Control and Support Building (CSB)**
- Metal wall studs, sheet rock and painting
- Electrical, piping and fire detection systems
- Heating, ventilation and air conditioning (HVAC)

**3 Utility Building** (not visible in photo)
- Electrical, piping and HVAC systems
- Concrete pads for exterior utilities
- Bulk chemical storage area

**2 Munitions Demilitarization Building (MDB)**
- Second lift concrete placements
- Structural steel and wall paneling
- Electrical, piping, mechanical systems
- Protective coatings and blast gates

**4 Supercritical Water Oxidation (SCWO) Process Building** (not visible in photo)
- Protective coatings and equipment tanks

**5 Laboratory Building** (not visible in photo)
- Assembling 20 building modules together atop completed building concrete foundation

# Control and Support Building (CSB)



**Exterior heating, ventilation and air conditioning systems (above left) are taking shape at the CSB's roof. Elsewhere at the CSB, Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) craft workers are integrating bulk commodities with installed support steel that will carry utilities such as chilled water and steam to support plant operations. Once complete, the CSB will house the control room and integrated control system used to operate BGCAPP.**

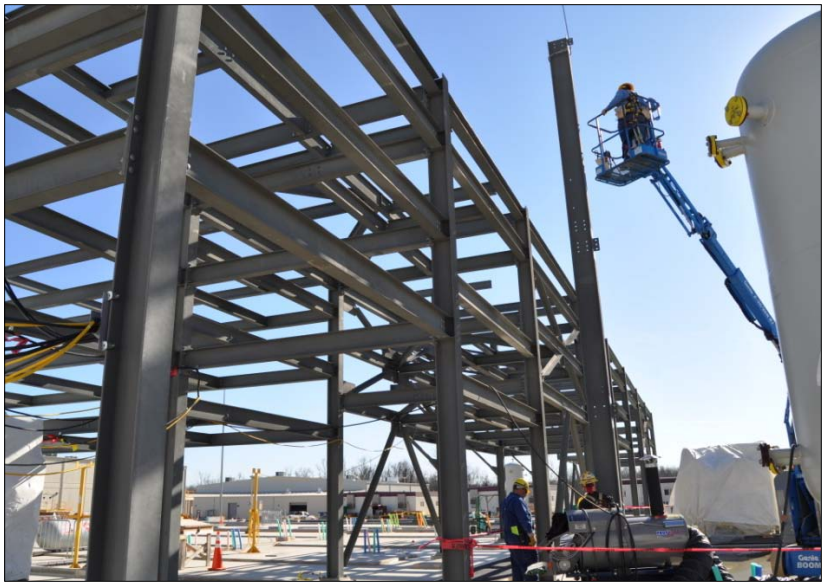
# Munitions Demilitarization Building (MDB)



**Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) craft workers have completed concrete wall placements for the MDB unpack area (above left). Once plant operations begin, from inside the unpack area, workers will safely remove the stored weapons from specialized transport containers to begin the automated destruction process. Craft workers installed three Energetics Batch Hydrolyzers (EBHs – above right) into the building. During plant operations, the EBHs are where the energetics and any residual agent will be neutralized in an irreversible chemical reaction by mixing with water and sodium hydroxide. The MDB is where the chemical weapons will be disassembled, the explosives removed and the agent neutralized.**

# Supercritical Water Oxidation (SCWO) Process Building





**Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) craft workers erect support steel (above left) at the SCWO Process Building. Elsewhere at the SCWO Process Building, craft workers have applied protective coatings (above right) to finished concrete pads for equipment and tanks. The protective coatings prevent unwanted liquids from migrating into the concrete during plant operations. The SCWO Process Building will house the reactors where agent and energetic hydrolysates, byproducts of the neutralization process, will be subjected to very high temperatures and pressures to destroy the hydrolysates' organic content.**

# Laboratory Building and Hydrolysate Storage Tanks area




**The Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) team has received the Laboratory Building's 20 modular components (above left) and are now assembling them together atop the building's concrete foundation. Craft workers are also assembling reinforcing steel (above right) to support upcoming concrete pad foundation placements for Hydrolysate Storage Tanks. During operations, the Laboratory will perform many vital functions including verification of agent destruction before agent and energetic hydrolysates, byproducts of the neutralization process, are emptied into hydrolysate holding tanks to await transfer to the Supercritical Water Oxidation Process Building.**

# Blue Grass Chemical Agent-Destruction Pilot Plant