Monthly Status Briefing

June 2013

Blue Grass Chemical Agent-Destruction Pilot Plant

Program Executive Office
Assembled Chemical Weapons Alternatives

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

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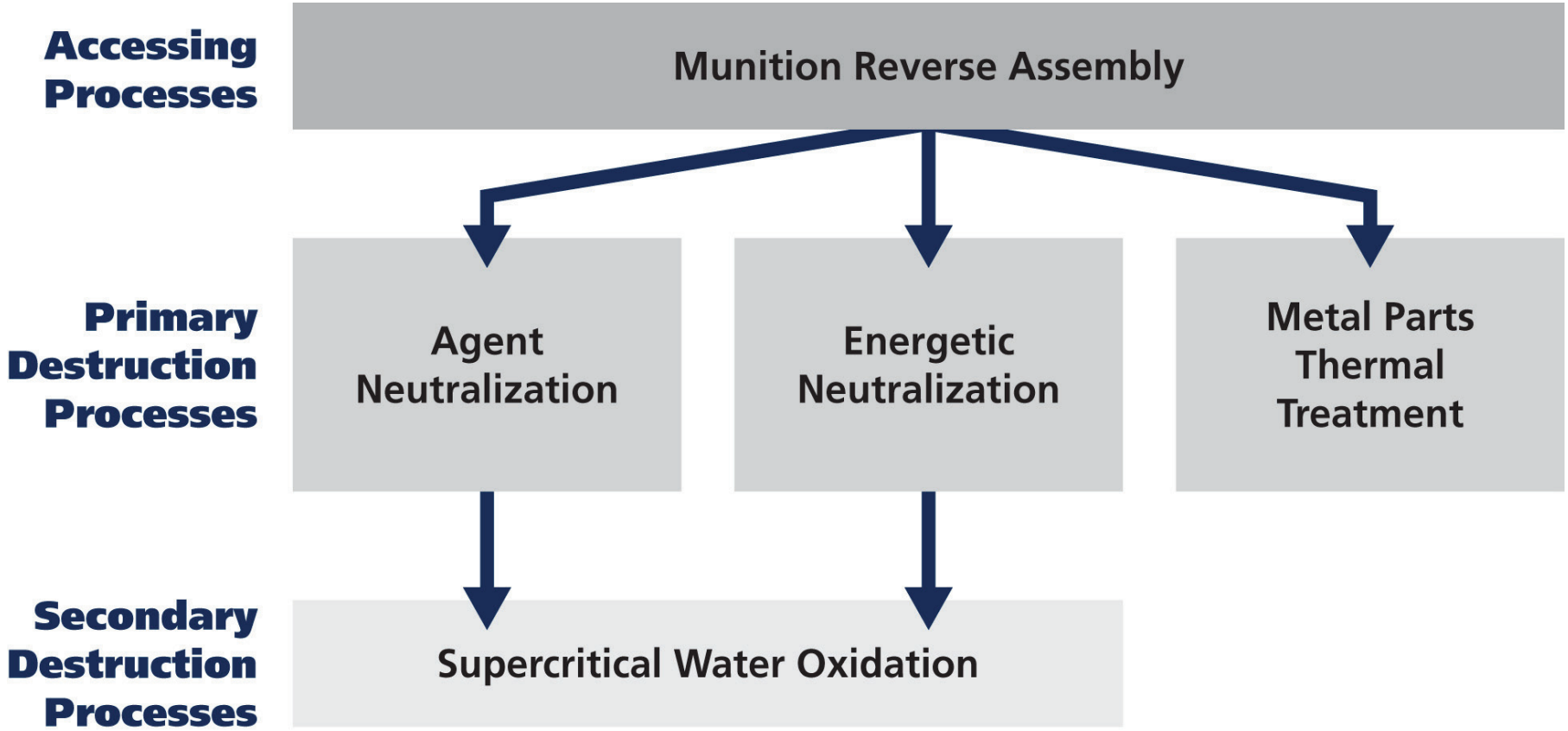
Neutralization followed by supercritical water oxidation will be used to destroy the Kentucky stockpile.



Safety

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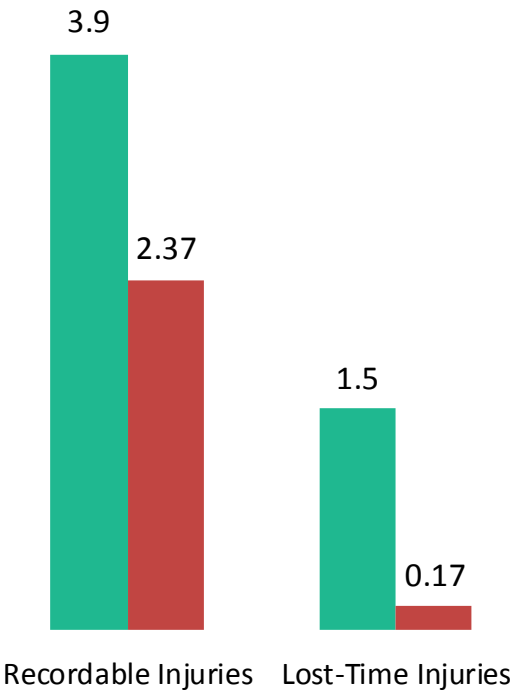

- Occupational Safety and Health Administration Voluntary Protection Program Star Status site
- Lost-time injury rate is **89 percent lower** and recordable injury rate is **39 percent lower** than industry average
- As of May 31, 2013, the project has completed 1,147,476 hours and 202 days without a lost-time accident

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

DEDICATED TO SAFETY EXCELLENCE
ACCIDENTS

VPP
Voluntary Protection Programs
An OSHA Cooperative Program

BGCAPP ACWA

Continued Safety Focus

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- **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

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- **Total project employment—1,112**
- **Richmond, Ky.—1,099**
  - Nonmanual—549
  - Craft—550
  - Local hires—60 percent
- **Other locations—13**
  - San Diego, Calif.
  - Columbus, Ohio
  - Reston, Va.

BGCAPP has hired 60 percent of its workforce from the local area.

Economic Impact

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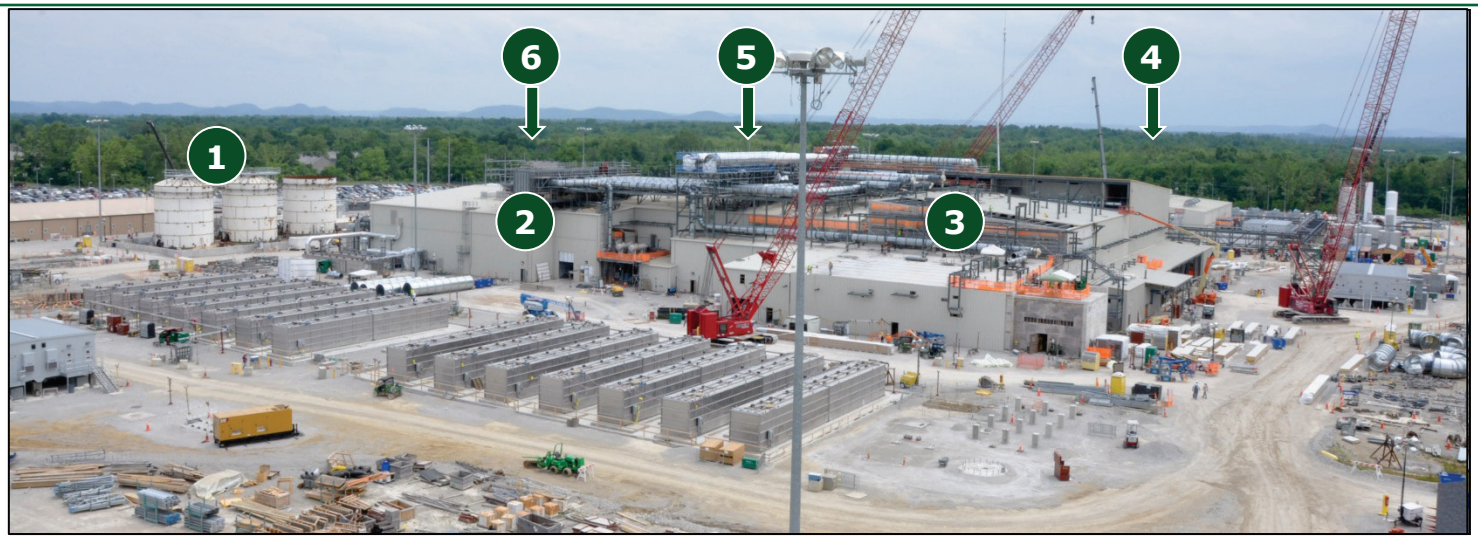
- **Acquisitions to date**
  - $108.5 million spent with Kentucky companies
  - $65.5 million spent in Madison and surrounding counties
- **Payroll to date (includes nonmanual and craft)**
  - $437 million of local payroll paid
  - $373 million more to be paid during the remainder of project

Construction Work in Progress

BGCAPP MONTHLY STATUS BRIEFING



1 Hydrolysate Storage Area
- Fabricating and erecting tanks

2 Control and Support Building (CSB)
- Electrical, piping and fire detection systems
- Heating, ventilation and air conditioning (HVAC)
- Facility control system cabinets and infrastructure

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)

BGCAPP MONTHLY STATUS BRIEFING

An electrician pulls cable (above left) into the CSB while a fellow electrician documents installation activities (above right) for facility control system cabinets and infrastructure. Once complete, the CSB will house the control room and the integrated control system used to operate the plant.

Munitions Demilitarization Building (MDB)

BGCAPP MONTHLY STATUS BRIEFING

Construction supervisors look upon the recently installed Rocket Cutting Machine (above left) inside an MDB Explosive Containment Vestibule. The Rocket Cutting Machine is specialized equipment designed to safely separate the rocket motor from the agent-filled warhead section. 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)

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Workers prepare another HSA tank lid for installation (above left). Meanwhile, workers safely install exterior siding (above right) at the SCWO Process Building. 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.

Balance of Plant Infrastructure

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The final Utility Power Center (above left) arrived to the BGCAPP site and was safely installed. During operations, UPCs will distribute electricity throughout BGCAPP. Carpenters erect scaffolding (above right) adjacent to the Utility Building to support exterior piping installations. Once complete, the UB will house equipment to produce steam, compressed air, chilled water and hot water for operations.

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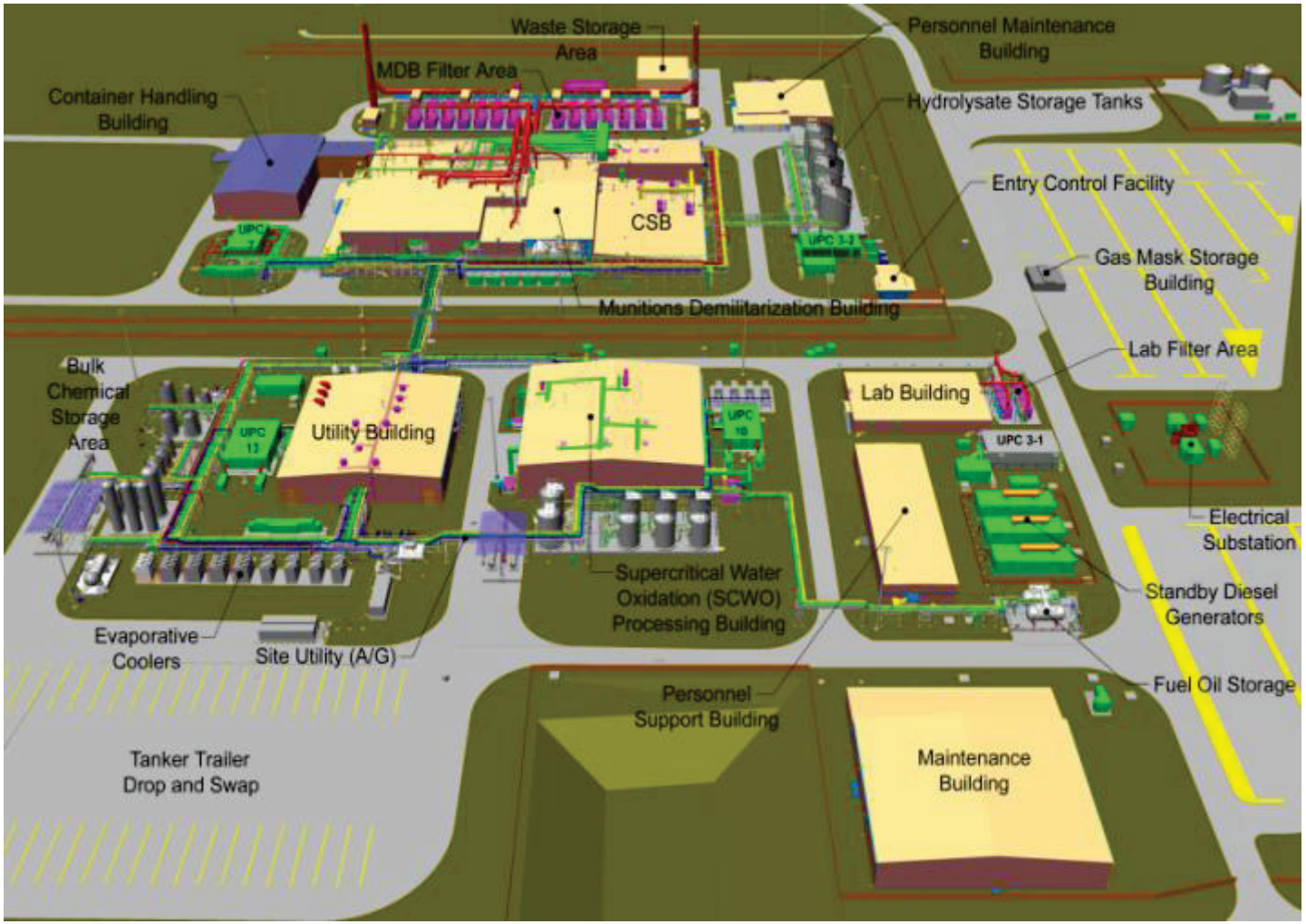
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