

Monthly Status Briefing



Blue Grass Chemical Agent-Destruction Pilot Plant

May 2015



Program Executive Office
Assembled Chemical Weapons Alternatives



BGCAPP

Blue Grass Chemical
Agent-Destruction Pilot Plant

www.peoacwa.army.mil



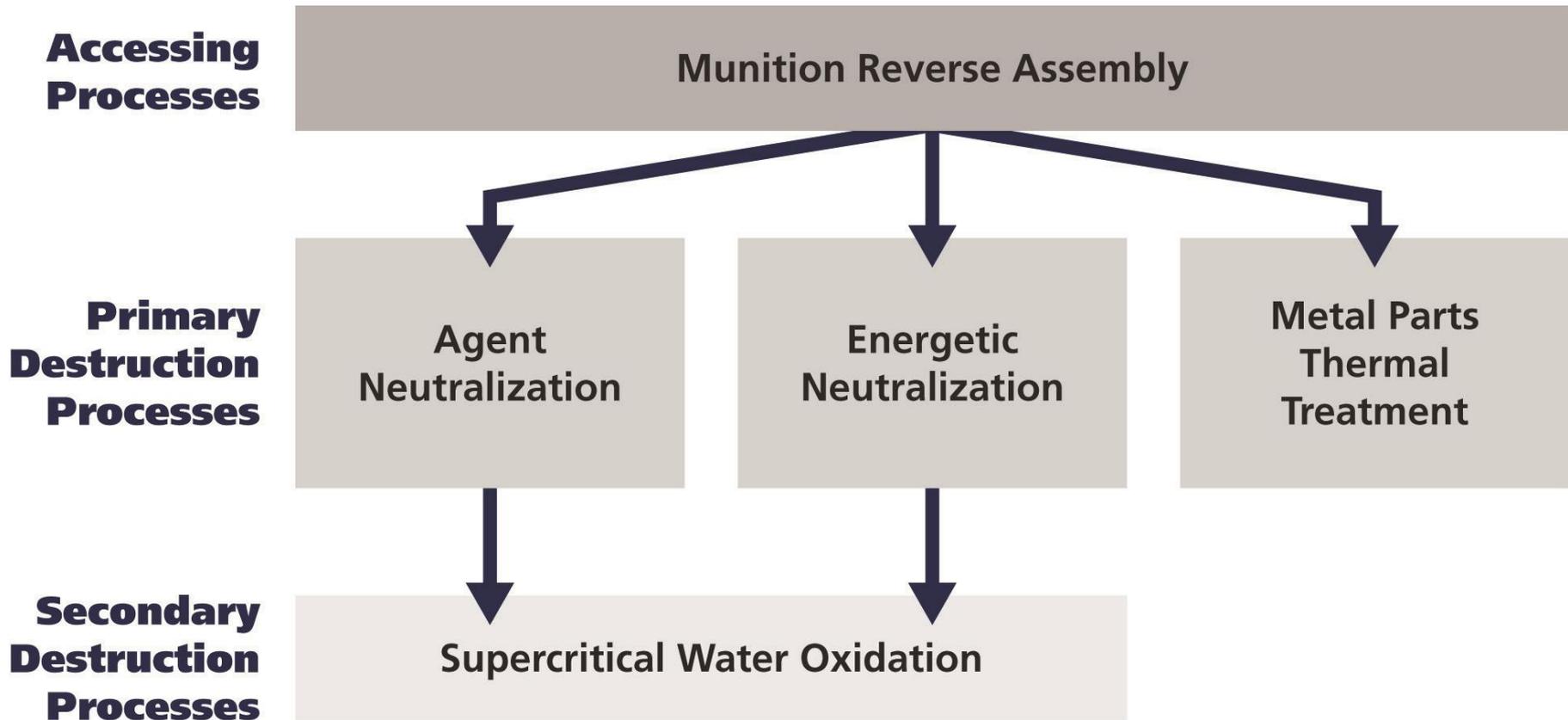
A PARTNERSHIP FOR SAFE CHEMICAL WEAPONS DESTRUCTION

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, Kentucky.
- The main plant technology selected by the Department of Defense to destroy the Blue Grass VX and GB (Sarin) nerve agent weapons stockpile is neutralization followed by supercritical water oxidation (SCWO).
- The technology selected by the Department of Defense to destroy the Blue Grass mustard (H) agent weapons stockpile is Explosive Destruction Technology, specifically the Static Detonation Chamber, or SDC.
- The Program Executive Office, Assembled Chemical Weapons Alternatives (PEO ACWA), 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 AECOM, Battelle, General Atomics and GP Strategies Corporation, is the systems contractor selected to design, build, systemize, pilot test, operate and close BGCAPP.

Main Plant Destruction Technology

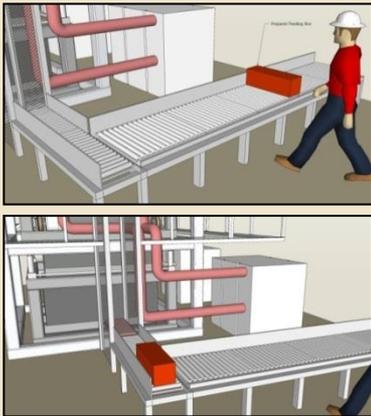
Neutralization followed by supercritical water oxidation will be used to destroy the nerve agent weapons stockpile.



Explosive Destruction Technology Static Detonation Chamber (SDC)

SDC will be used to destroy the mustard agent weapons stockpile.

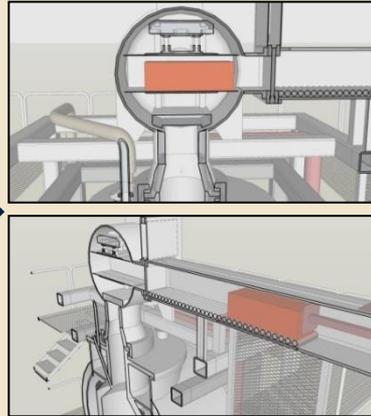
Step 1



Workers place mustard projectiles in feed tray with aid of material-handling equipment

System allows for single handling of projectiles by workers

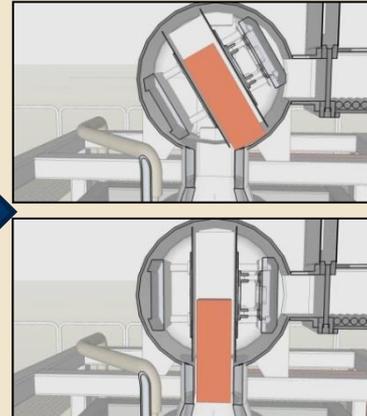
Step 2



Projectiles conveyed to top of vessel

For added safety, it is a fully automatic, double air-lock feeding conveyor system

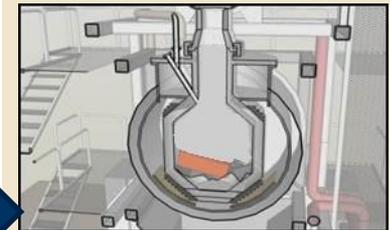
Step 3



Projectiles fed into electrically heated detonation chamber

Chamber temperature maintained above critical temperature of energetics inside the projectiles

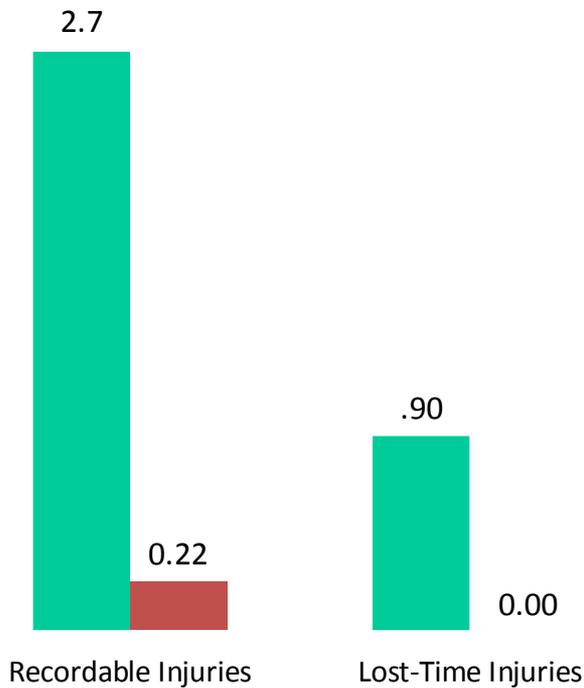
Step 4



High heat detonate/deflagrate projectiles, mustard agent and energetics destroyed by explosion/thermal decomposition

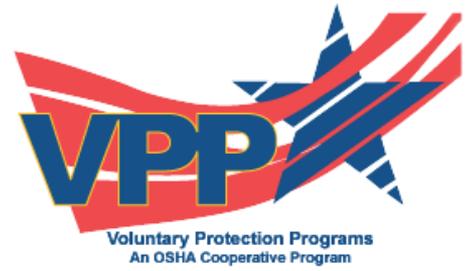
Off-gases treated by air pollution control system

Safety



- Safety remains a core value of the project workforce
- Re-certified Occupational Safety and Health Administration Voluntary Protection Program Star Status site
- Lost-time injury rate is **100 percent lower** and recordable injury rate is **92 percent lower** than industry average
- As of April 30, 2015, the project has completed 3,621,766 hours and 365 days without a lost-time accident

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



Current Project Staffing

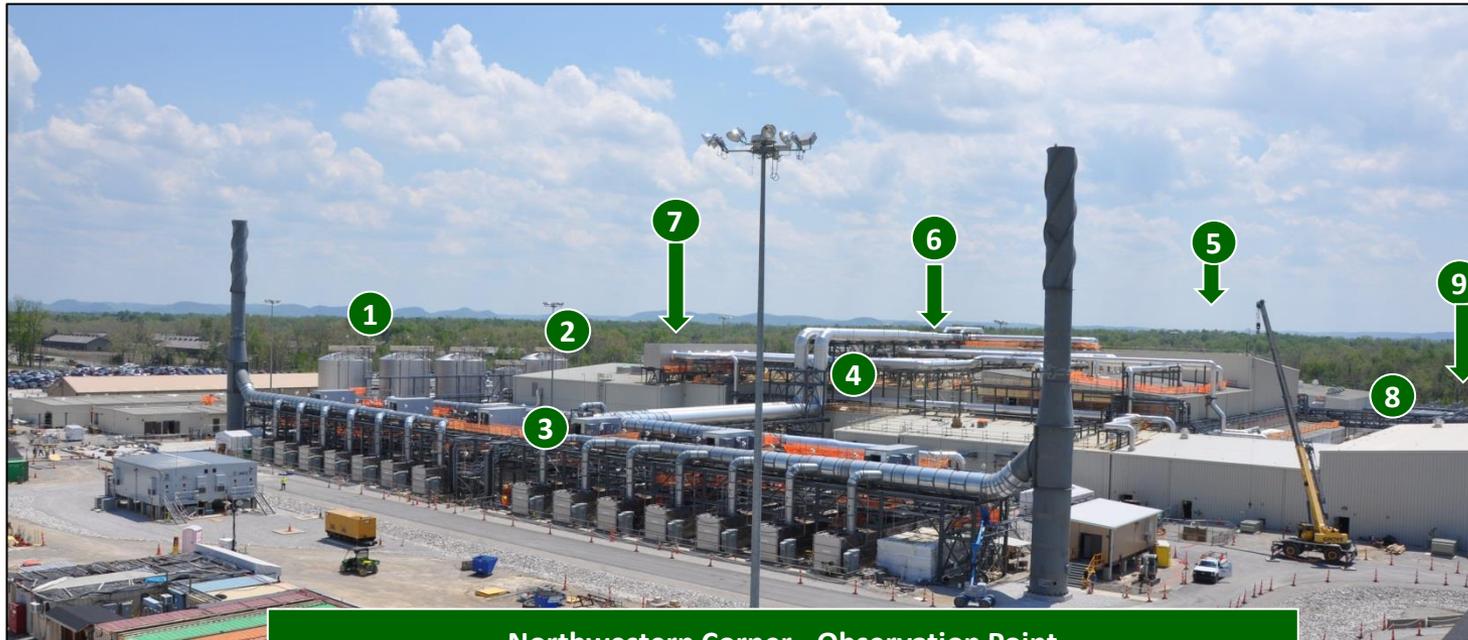
- **Total project employment—1,568**
- **Richmond, Ky.—1,554**
 - Nonmanual—840
 - Craft—714
 - Local hires—56 percent
- **Other locations—14**
 - Pasadena, Calif.
 - San Francisco, Calif.



Electricians set conduit outside of the Supercritical Water Oxidation Process Building tank area.

- **Acquisitions to date**
 - \$139.1 million spent with Kentucky companies
 - \$79.3 million spent in Madison and surrounding counties
- **Payroll to date**
(includes nonmanual and craft)
 - \$725 million of local payroll paid

Main Plant Work in Progress



Northwestern Corner - Observation Point

- 1 Hydrolysate Storage Area
- 2 Control and Support Building
- 3 Munitions Demilitarization Building (MDB) Filter Banks
- 4 MDB
- 5 Utility Building
- 6 Supercritical Water Oxidation Building (not visible in photo)
- 7 Laboratory Building (not visible in photo)
- 8 Container Handling Building
- 9 Explosive Destruction Technology Facility Site

Safety begins with STARRT



Prior to starting work, a team participates in a Safety Task Analysis and Risk Reduction Talk, or STARRT. The STARRT program helps to ensure each team member understands the risks associated with each task.

Progress for the Container Handling Building



Cement finishers and laborers pour concrete for a pad outside of the Container Handling Building.



An electrician installs an emergency light high above the floor of the Container Handling Building. This emergency light is powered by a battery pack.

Munitions Demilitarization Building Filter Area



A mechanical technician for the Heating, Ventilation and Air Conditioning team calibrates a transmitter that will send pressure information from the filters to the Control Room.



Above, a carpenter directs the operator of a lift as a ladder, handrails and safety fencing are delivered to the top of the Munitions Demilitarization Building Filter Area.

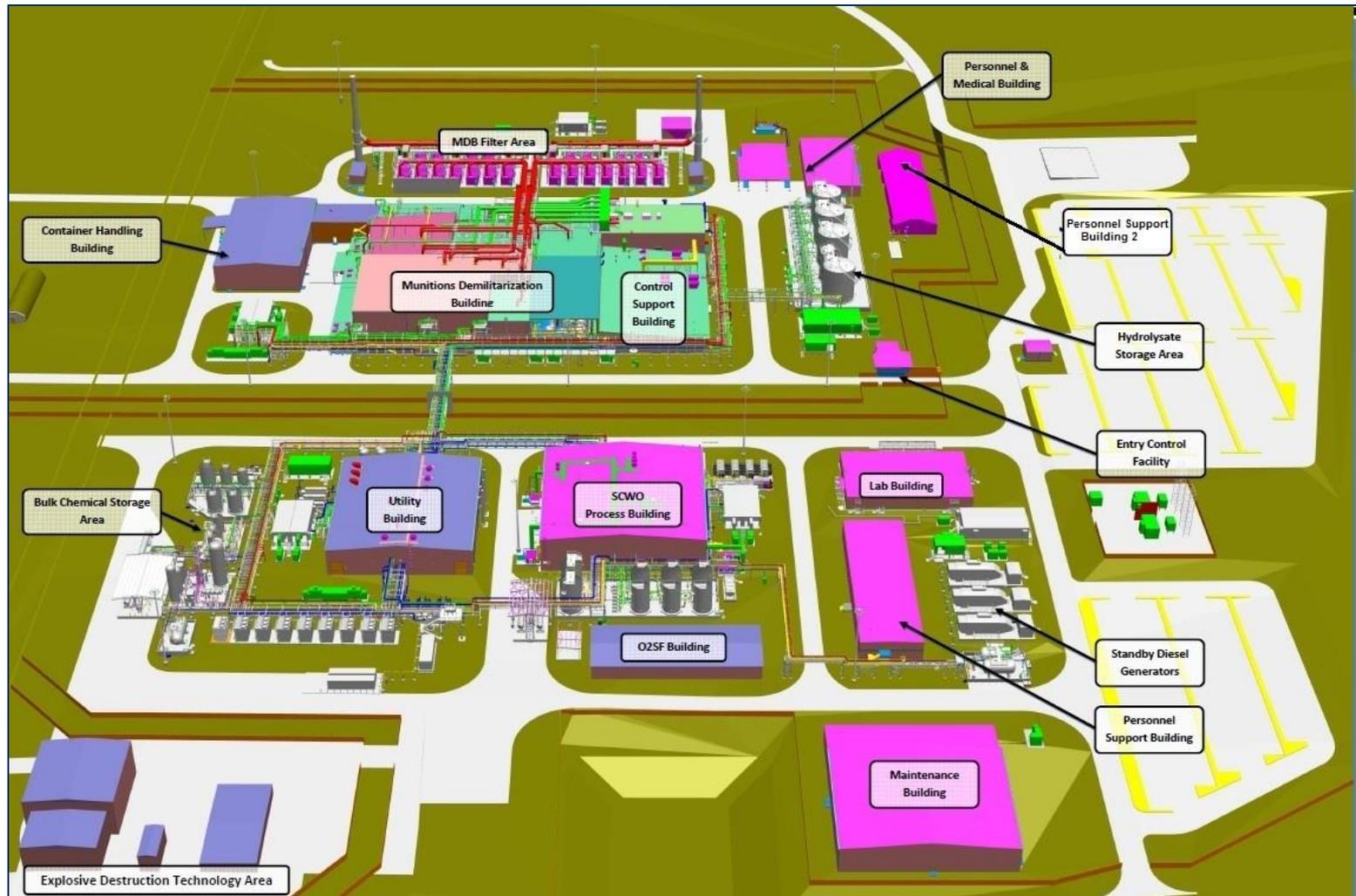
Utility Building Evaporative Cooling System



Above, an electrician pushes cable onto an overhead rack connected to the Evaporative Cooling System.

Left, an insulator attaches a metal jacket to an insulated pipe in an area outside of the Utility Building.

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