

# Monthly Status Briefing

*August 2015*



Blue Grass Chemical Agent-Destruction Pilot Plant



A PARTNERSHIP FOR SAFE CHEMICAL WEAPONS DESTRUCTION

**BGCAPP**  
Blue Grass Chemical  
Agent-Destruction Pilot Plant

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

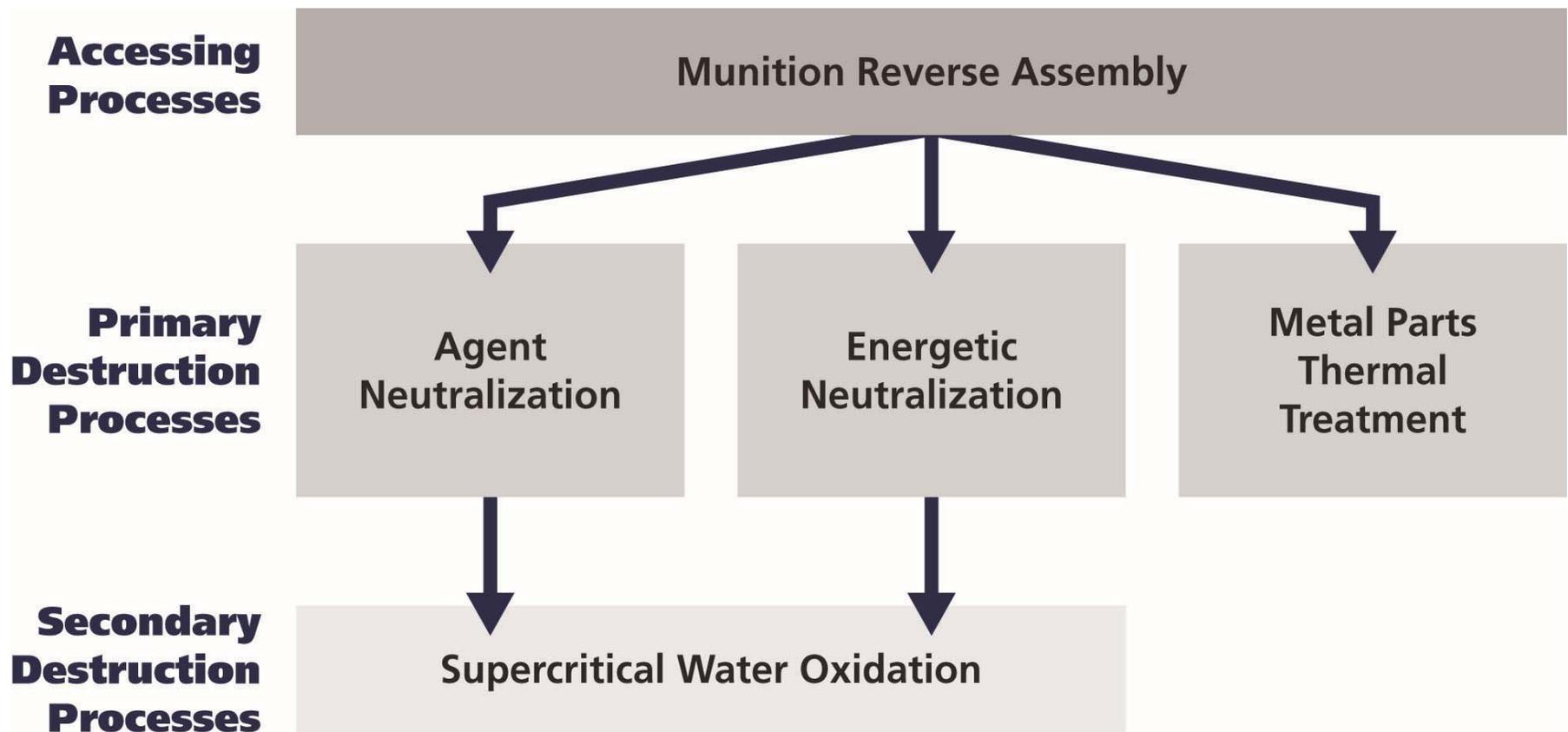


# Project Background

- 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 (BPBG), 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

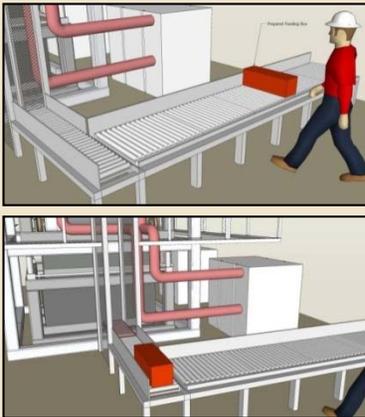
**Neutralization followed by supercritical water oxidation will be used to destroy the nerve agent weapons stockpile.**



# Explosive Destruction Technology Static Detonation Chamber (SDC)

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

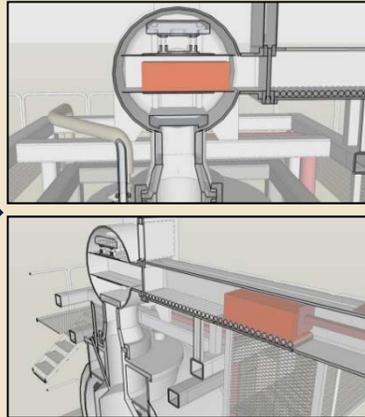
## Step 1



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

System allows for single handling of projectiles by workers

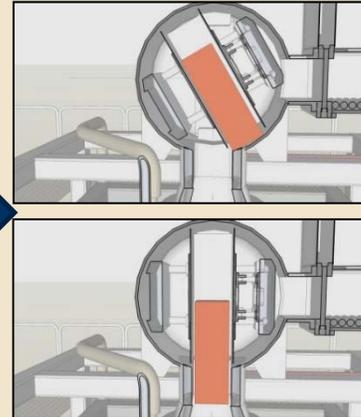
## Step 2



Projectiles conveyed to top of vessel

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

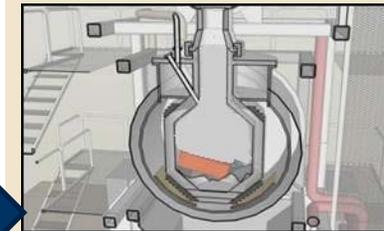
## Step 3



Projectiles fed into electrically heated detonation chamber

Chamber temperature maintained above critical temperature of energetics inside the projectiles

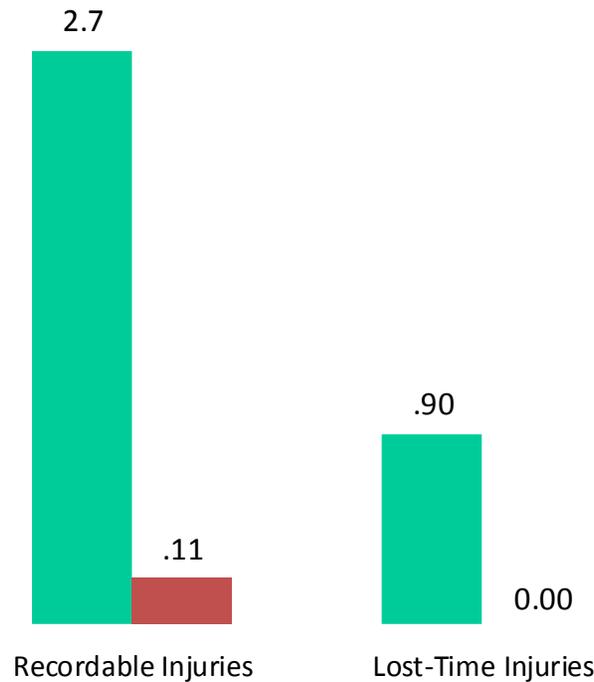
## Step 4



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 **96 percent lower** than industry average
- As of July 31, 2015, the project has completed 4,578,764 hours and 457 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—1,310**
- **Richmond, Ky.—1,298**
  - Nonmanual—**834**
  - Craft—**464**
  - Local hires—**50 percent**
- **Other locations—12**
  - Pasadena, Calif.
  - San Francisco, Calif.



**A foreman and an apprentice complete a fire protection connection for a sprinkler outside the Medical Facility.**

# Economic Impact

- **Acquisitions to date**
  - \$148.7 million spent with Kentucky companies
  - \$88.3 million spent in Madison and surrounding counties
- **Payroll to date**  
(includes nonmanual and craft)
  - \$762 million of local payroll paid



**Concrete is poured for a pad adjacent to the Container Handling Building.**

# Main Plant Work in Progress

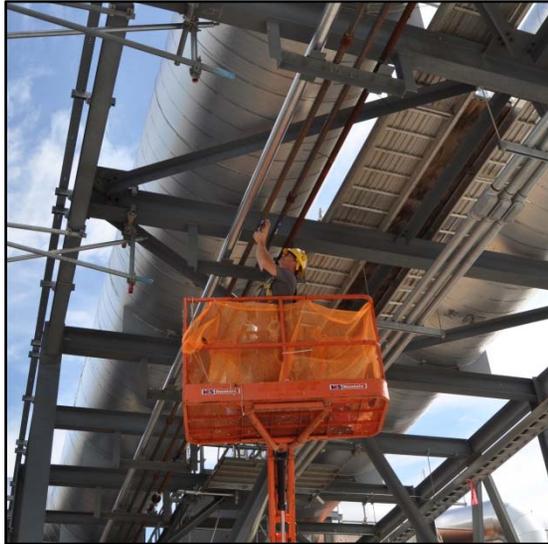


## Northwestern Corner - Observation Point

- |   |   |   |
|---|---|---|
| <b>1</b> Personnel Maintenance Building                         | <b>6</b> MDB  | <b>10</b> Supercritical Water Oxidation Building (not visible in photo) |
| <b>2</b> Medical Facility                                       | <b>7</b> Container Handling Building                    | <b>11</b> Laboratory Building (not visible in photo)                    |
| <b>3</b> Hydrolysate Storage Area                               | <b>8</b> Explosive Destruction Technology Facility Site |   |
| <b>4</b> Control and Support Building                           | <b>9</b> Utility Building                               |   |
| <b>5</b> Munitions Demilitarization Building (MDB) Filter Banks |   |   |



# Main Plant Progress

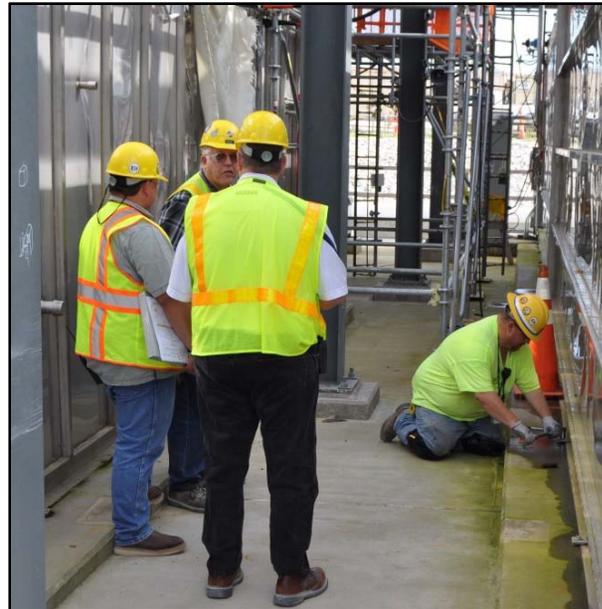


**Left: An operations mechanic affixes labels to piping leading to the Munitions Demilitarization Building filter bank area.**

**Right: Systemization electricians test fiber optic cables in an junction box inside the unpack area in the Munitions Demilitarization Building.**



**Right: A Quality Assurance team witnesses the final torquing on an anchor bolt to assure the required value is reached on a Munitions Demilitarization Building filter bank.**



# Stakeholder Outreach: Chemical Stockpile Emergency Preparedness Program



**Above: Officials from the Kentucky Chemical Stockpile Emergency Preparedness Program (CSEPP) toured the Blue Grass Chemical Agent-Destruction Pilot Plant in August. The primary goal of CSEPP is to educate and enhance emergency preparedness in communities surrounding the chemical stockpile slated for destruction. At left, Jeff Brubaker, site project manager, provides information in the Unpack Area of the Munitions Demilitarization Building. At right, the group listens to details regarding the Explosive Containment Vestibule.**

# Community Stewardship: Salvation Army Food Drive

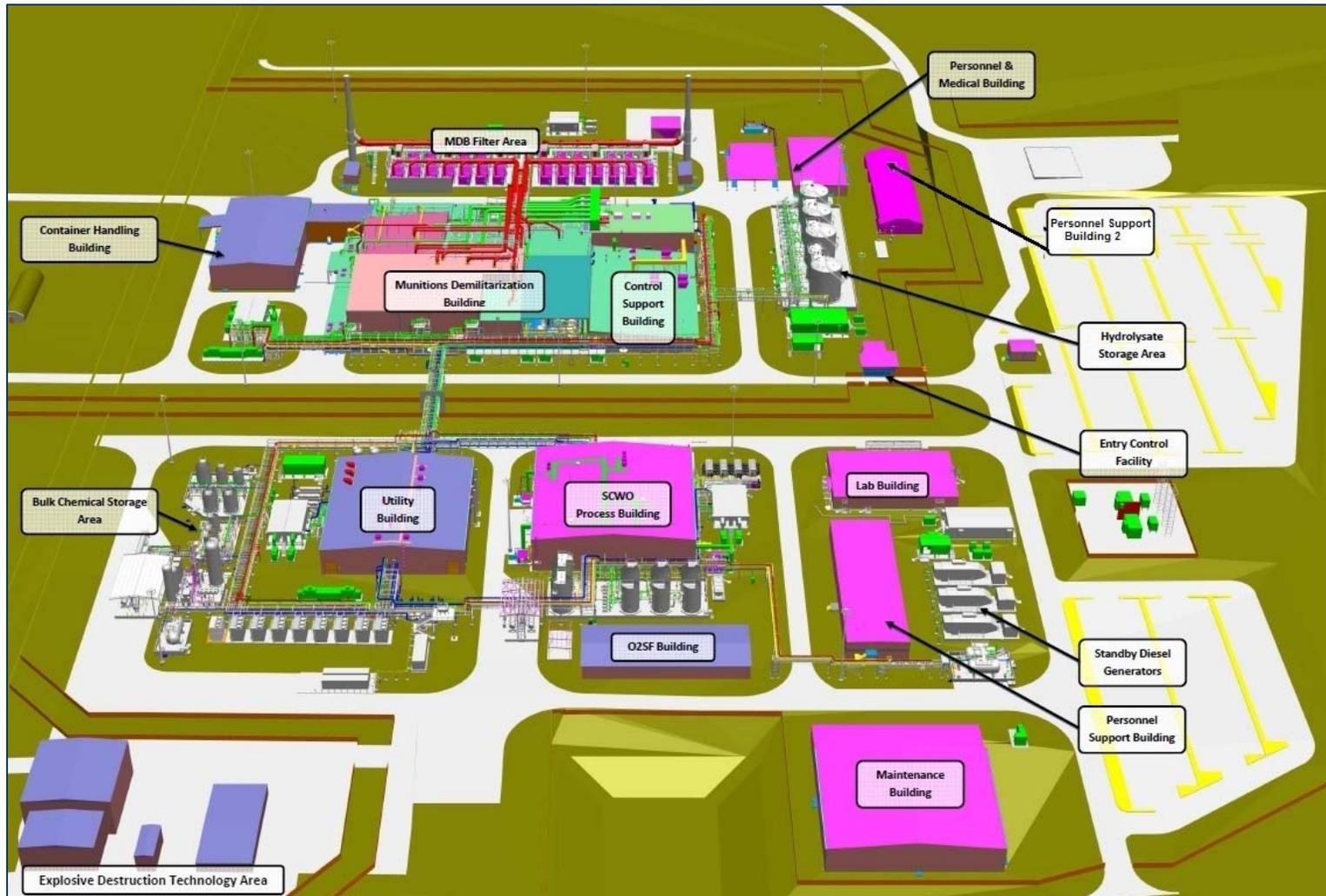


Left, BPBG employees help load the donated food into a Salvation Army truck. Below, the food shelves are completely restocked following the campaign.

Bechtel Parsons Blue Grass (BPBG) employees replenished the Richmond, Kentucky, Salvation Army's food bank shelves with donations of food and money. The employees collected four tons of food and more than \$13,200 for the Salvation Army during a two-month campaign.



# Blue Grass Chemical Agent-Destruction Pilot Plant



# Contact Information



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Program Management  
Advanced Chemical Response Alternatives

