

Monthly Status Briefing

July 2015



Blue Grass Chemical Agent-Destruction Pilot Plant



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

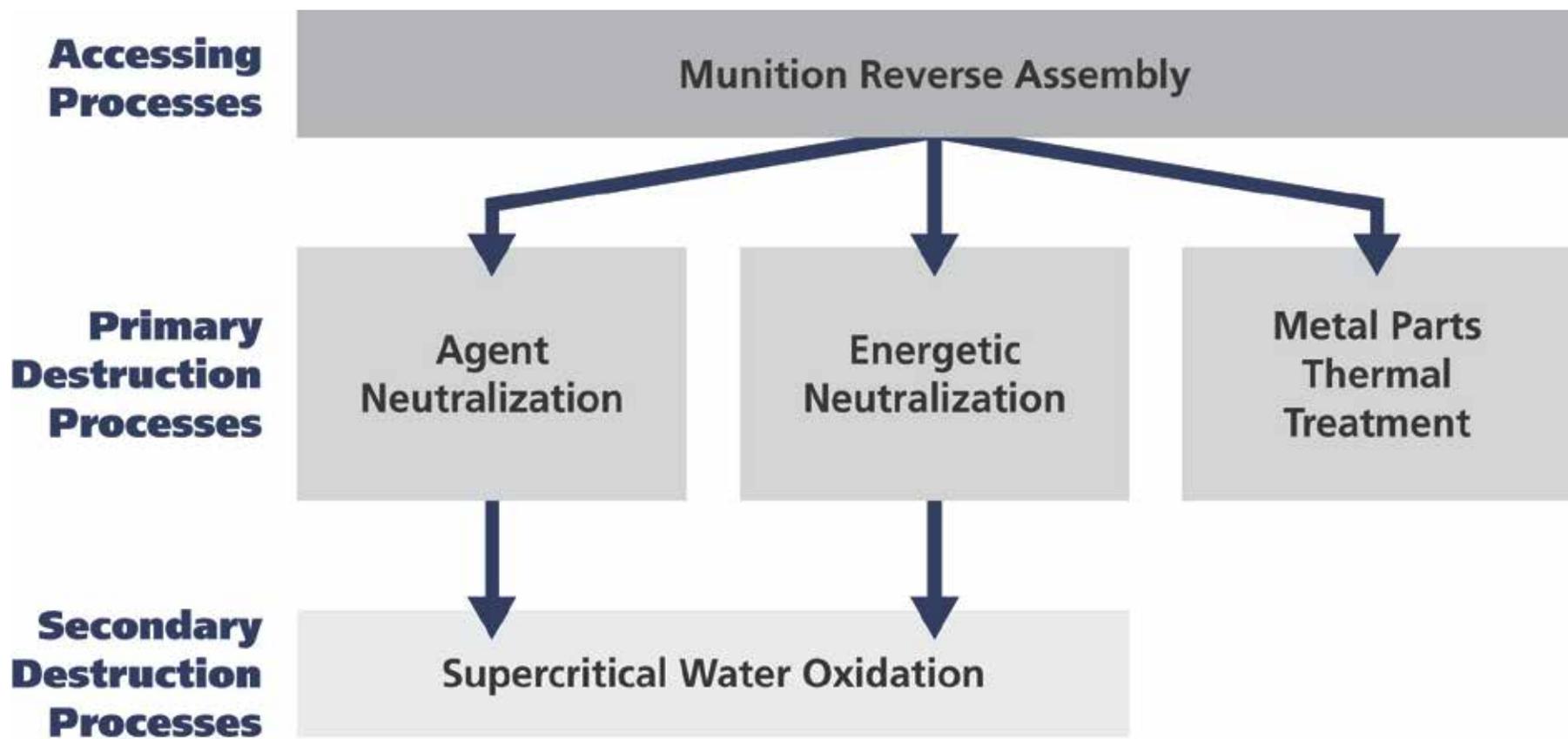


- The Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) will safely destroy 523 tons of chemical agent in rockets and artillery projectiles stored at the Blue Grass Army Depot in Richmond, Kentucky.
- The main plant technology selected by the Department of Defense to destroy the Blue Grass VX 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

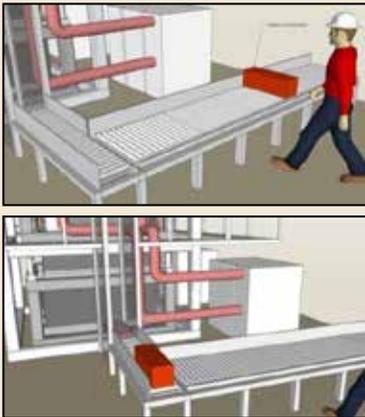
Neutralization followed by supercritical water oxidation will be used to destroy the nerve agent weapons stockpile.



Explosive Destruction Technology Static Detonation Chamber (SDC)

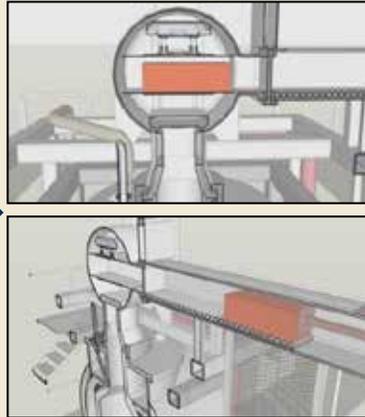
SDC will be used to destroy the mustard agent weapons stockpile.

Step 1



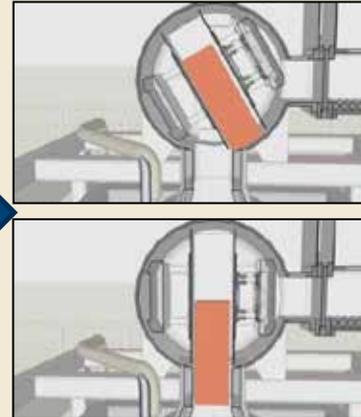
Workers place mustard projectiles in feed tray with aid of material-handling equipment
System allows for single handling of projectiles by workers

Step 2



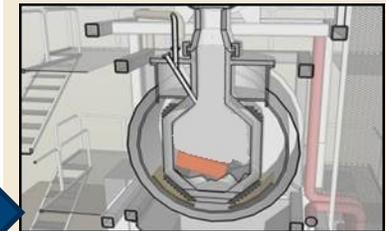
Projectiles conveyed to top of vessel
For added safety, it is a fully automatic, double air-lock feeding conveyor system

Step 3



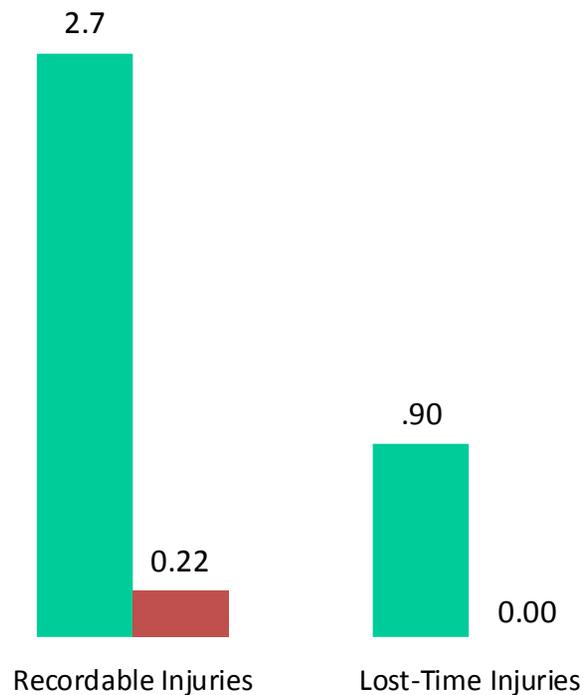
Projectiles fed into electrically heated detonation chamber
Chamber temperature maintained above critical temperature of energetics inside the projectiles

Step 4



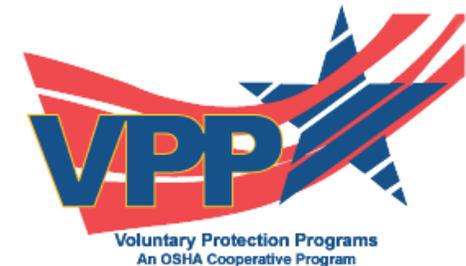
High heat detonate/deflagrate projectiles, mustard agent and energetics destroyed by explosion/thermal decomposition
Off-gases treated by air pollution control system

Safety



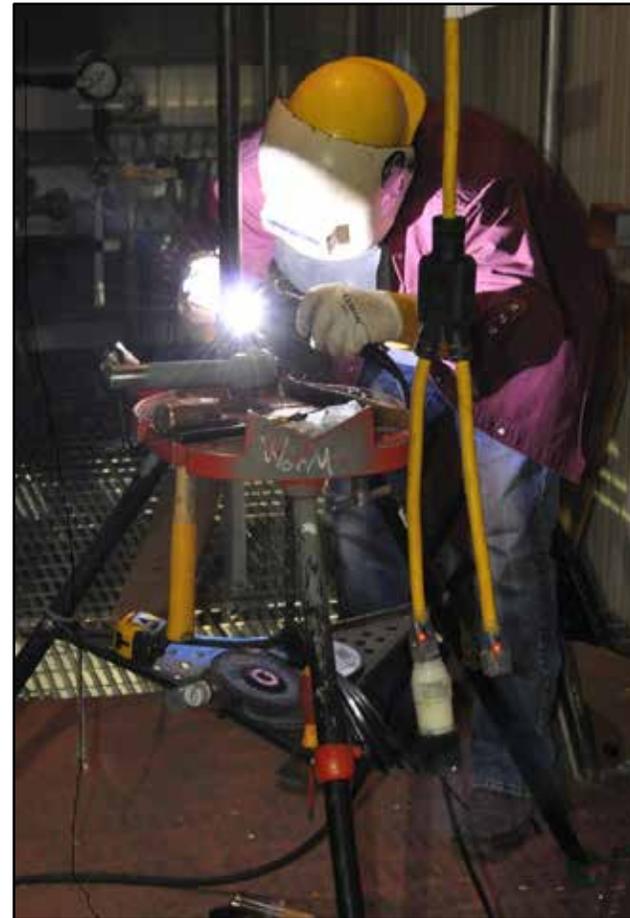
- Safety remains a core value of the project workforce
- Re-certified Occupational Safety and Health Administration Voluntary Protection Program Star Status site
- Lost-time injury rate is **100 percent lower** and recordable injury rate is **92 percent lower** than industry average
- As of June 30, 2015, the project has completed 4,312,935 hours and 426 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—1,434**
- **Richmond, Ky.—1,421**
 - Nonmanual— **828**
 - Craft— **593**
 - Local hires—**53.8 percent**
- **Other locations—**
 - Pasadena, Calif.
 - San Francisco, Calif.



A pipefitter welds a pipe header for heat exchangers near the Energetics Neutralization Reactor.

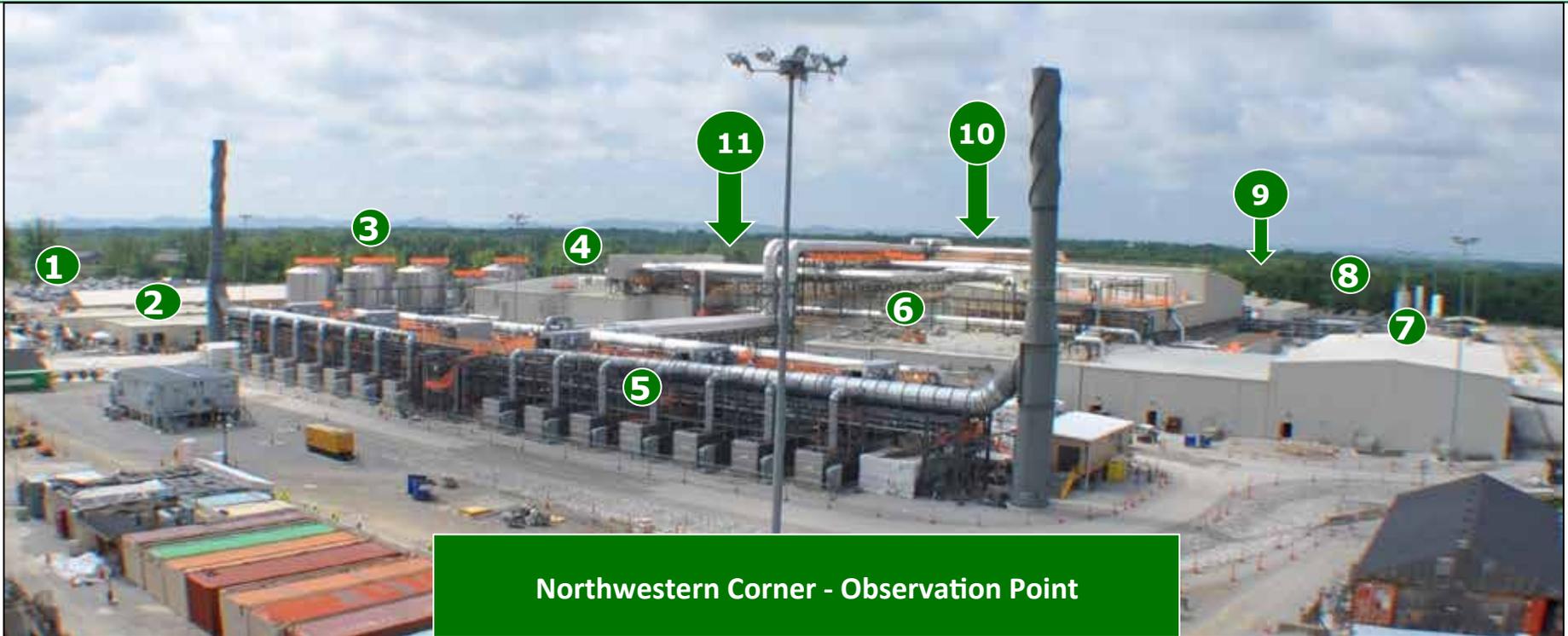
Economic Impact

- **Acquisitions to date**
 - \$148.2 million spent with Kentucky companies
 - \$87.9 million spent in Madison and surrounding counties
- **Payroll to date**
(includes nonmanual and craft)
 - \$750 million of local payroll paid



A carpenter scribes a line on a support post for a railing at the Medical Facility.

Main Plant Work in Progress



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



Main Plant Progress



Left: A laborer removes scaffolding from above the Munitions Demilitarization Building Filter Bank area.



Right: A contractor installs supports for a soffit on the Entry Control Facility.



Left: Two electricians extend conduit outside of the Munitions Demilitarization Building.



Right: An insulator puts a bead of caulk on a metal jacket over a pipe at the Munitions Demilitarization Filter Bank area.

Stakeholder Outreach: Kentucky Department for Environmental Protection



Left: Inspectors, permit writers and reviewers from the Kentucky Department for Environmental Protection (KDEP) performed a walk down of the BGCAPP in July.



Right: The KDEP group inside a Munitions Demilitarization Filter Bank unit.



Left: A KDEP staff member takes notes while on the tour.

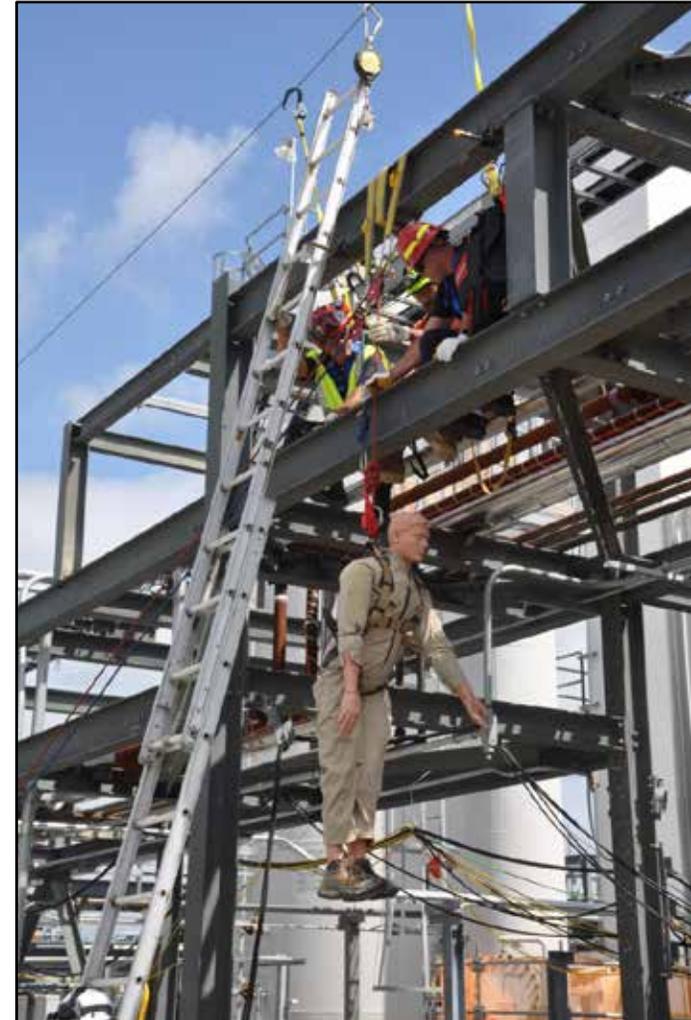


Right: The KDEP team listens during a stop in the Agent Neutralization System area.

Safety Partnership: Blue Grass Army Depot



The BGCAPP rope rescue team and the Blue Grass Army Depot Fire Department conducted a rope rescue at elevation exercise. It was the first training session integrating the BGCAPP site and the fire department.

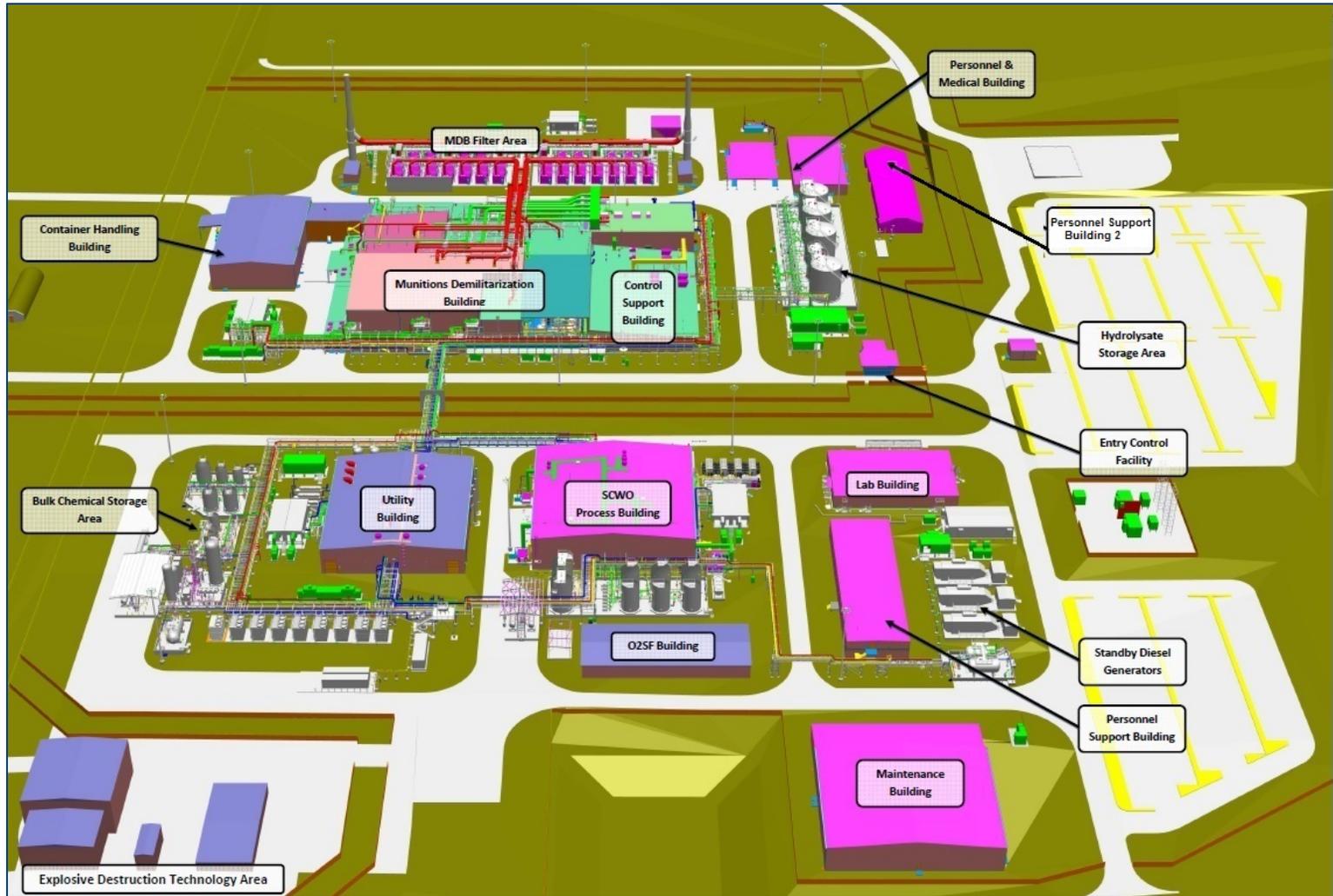


Community Stewardship: Donating Blood



Bechtel Parsons Blue Grass employees rolled up their sleeves to donate blood to the Central Kentucky Blood Center. The summer months are especially critical for the blood center, which services nearly 70 medical facilities in eastern and central Kentucky.

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