Monthly Status Briefing

Blue Grass Chemical Agent-Destruction Pilot Plant

Program Executive Office Assembled Chemical Weapons Alternatives

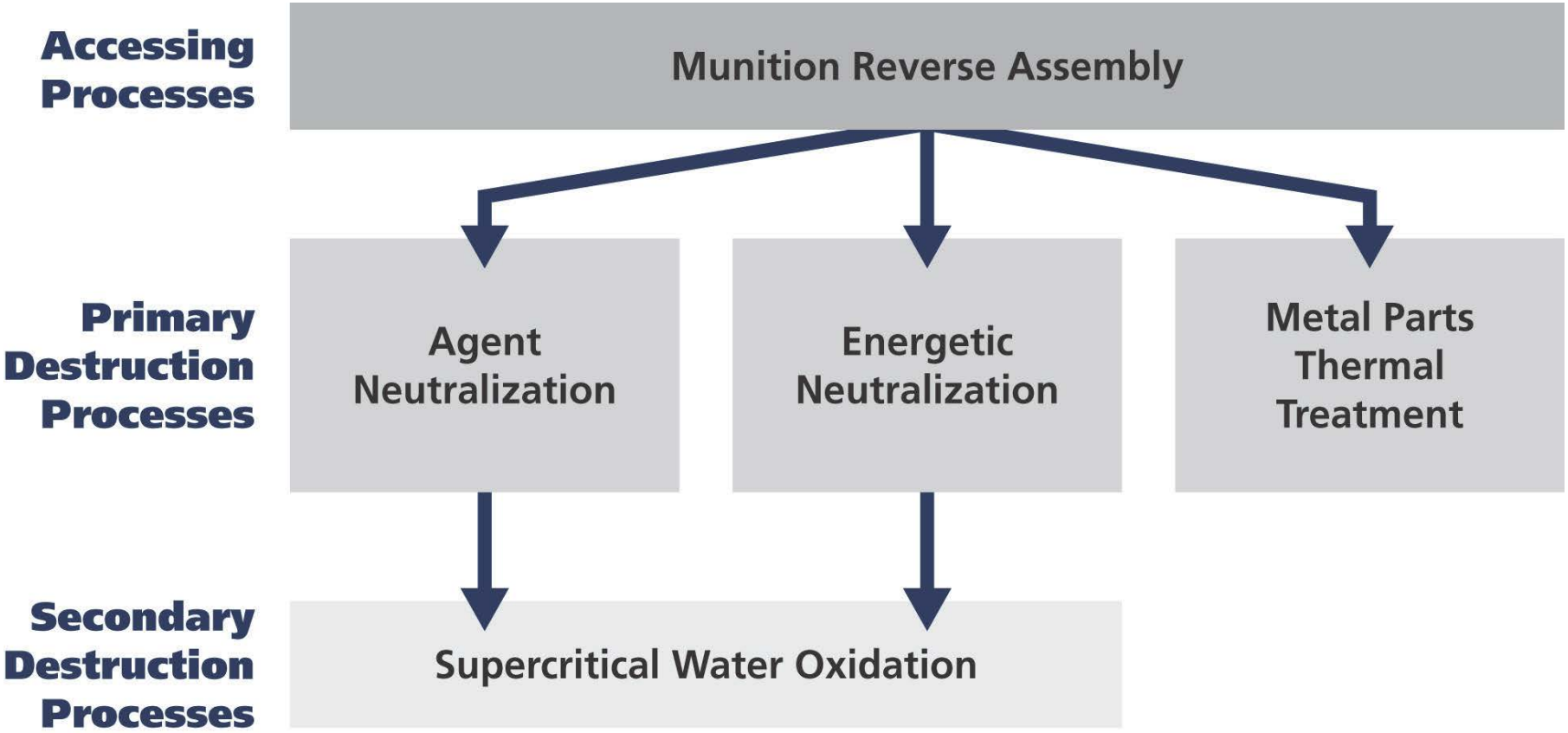
October 2014

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 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.
- 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.

Main Plant Destruction Technology

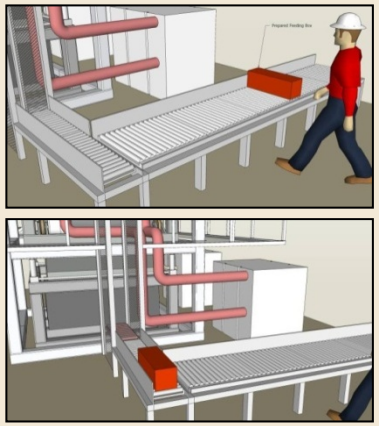
Neutralization followed by supercritical water oxidation will be used to destroy the nerve agent weapons stockpile.



Explosive Destruction Technology
Static Detonation Chamber (SDC)

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

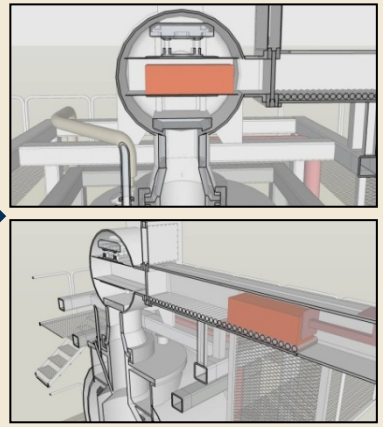
Step 1



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

System allows for single handling of projectiles by workers

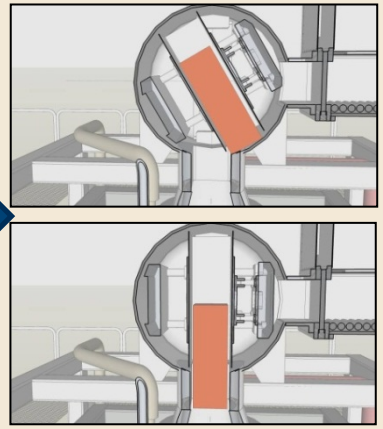
Step 2



Projectiles conveyed to top of vessel

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

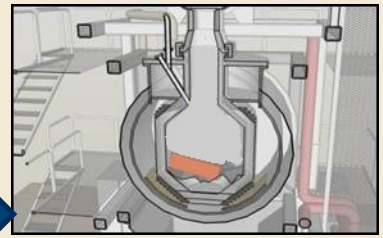
Step 3



Projectiles fed into electrically heated detonation chamber

Chamber temperature maintained above critical temperature of energetics inside the projectiles

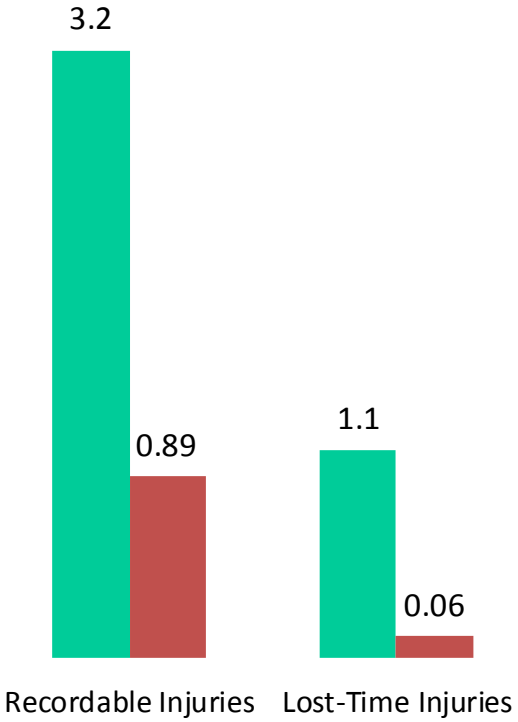
Step 4



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
- Occupational Safety and Health Administration Voluntary Protection Program Star Status site
- Lost-time injury rate is **95 percent lower** and recordable injury rate is **72 percent lower** than industry average
- As of September 30, 2014, the project has completed 1,519,660 hours and 153 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—1,576**
- **Richmond, Ky.—1,569**
  - Nonmanual—821
  - Craft—737
  - Local hires—57 percent
- **Other locations—7**
  - San Diego, Calif.
  - Columbus, Ohio
  - Reston, Va.

Workers install structural steel on the Container Handling Building.

Economic Impact

- **Acquisitions to date**
  - $132 million spent with Kentucky companies
  - $75.5 million spent in Madison and surrounding counties
- **Payroll to date**
  (includes nonmanual and craft)
  - $634 million of local payroll paid

Main Plant Work in Progress

BGCAPP MONTHLY STATUS BRIEFING

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

Entry Control Facility

Work has begun on the Entry Control Facility (ECF). When operations begin, the ECF will be the main entry point to the plant.

Munitions Demilitarization Building (MDB)

Primary construction activities have completed in the Munitions Demilitarization Building Room 103. The rocket cutting machine (pictured) in Explosive Containment Vestibule (ECV) One is the room's only occupant.

Fire Water Storage Tanks and Pump House

The Fire Water Storage Tanks and Pump House will be the first BGCAPP system to be turned over from Systemization to Operations. Currently, the official turnover package is being reviewed by the Operations Team.

Support Infrastructure

As construction nears completion, dirt and gravel roads are giving way to paved surfaces, as in this roadway near the Explosive Destruction Technology (EDT) site (left photo). At right is a "Triple Nine" crane that has been a workhorse at the site for several years. It has a lifting capacity of 250 tons. Now that construction is nearing completion it is no longer needed and has been removed.

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