Monthly Status Briefing

February 2016

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

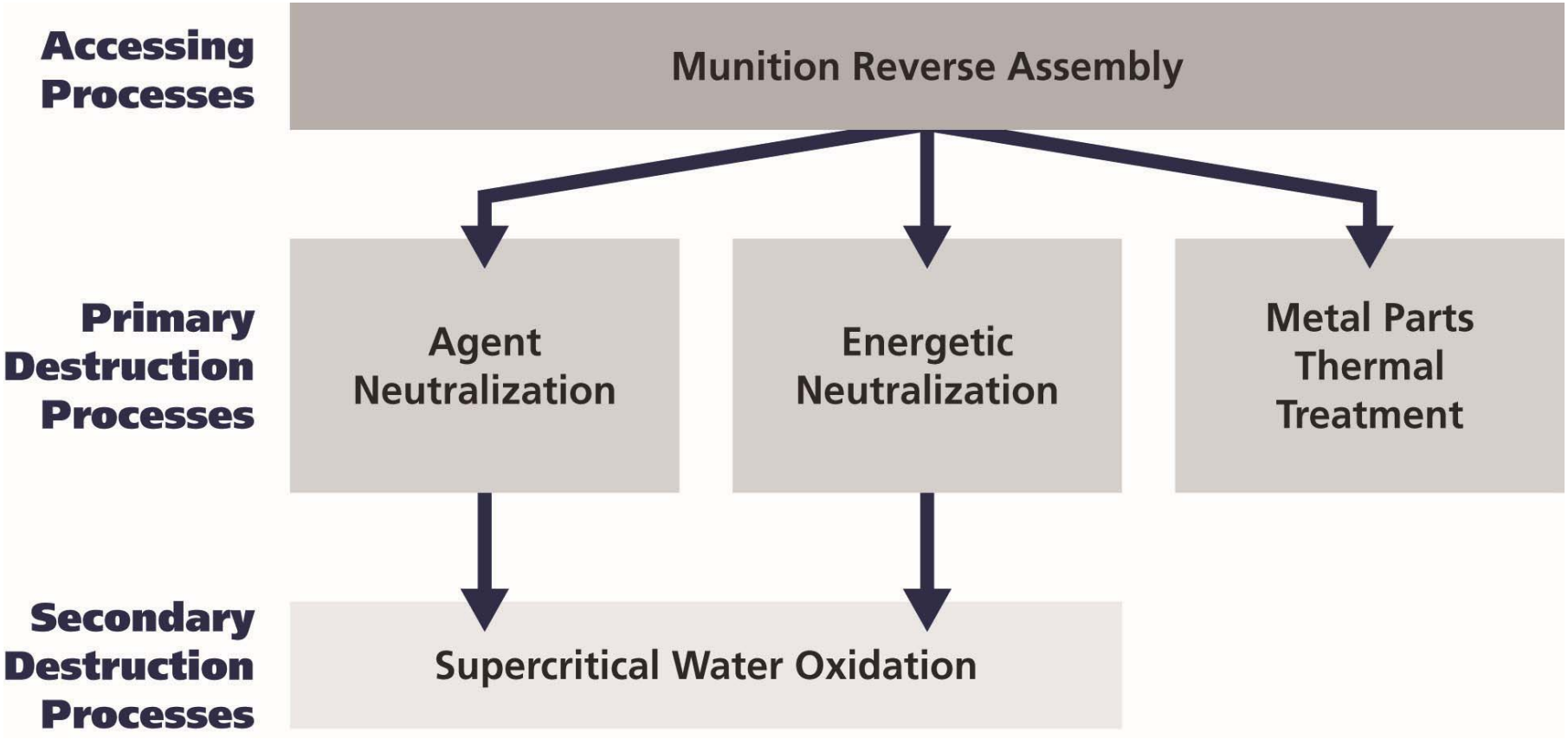
A Partnership for Safe Chemical Weapons Destruction

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.
- The technology selected by the Department of Defense to destroy the Blue Grass mustard (H) agent weapons stockpile is Explosive Destruction Technology (EDT), specifically the Static Detonation Chamber, or SDC.
- The Program Executive Office, Assembled Chemical Weapons Alternatives, 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

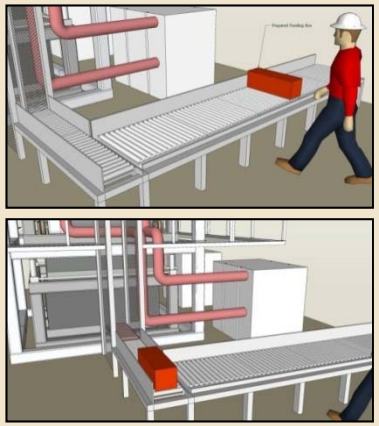
Neutralization followed by supercritical water oxidation will be used to destroy the nerve agent weapons stockpile.



Explosive Destruction Technology

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

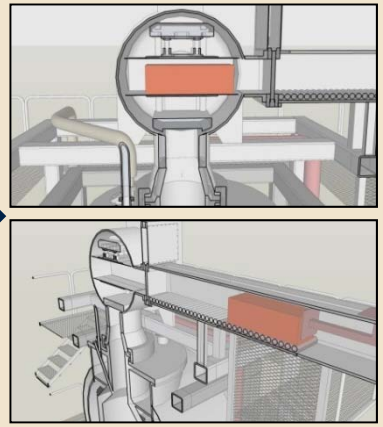
Step 1



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

System allows for minimal handling of projectiles by workers

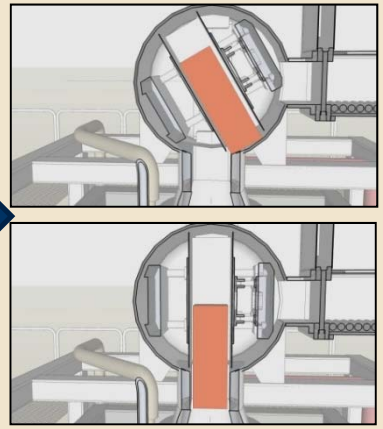
Step 2



Projectiles conveyed to top of vessel

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

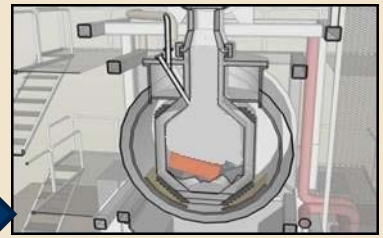
Step 3



Projectiles fed into electrically heated detonation chamber

Chamber temperature maintained above critical temperature of energetics inside the projectiles

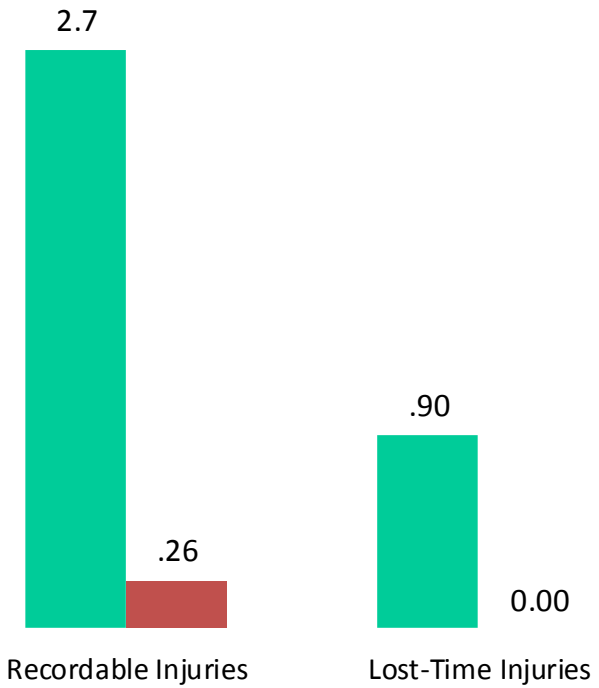
Step 4



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 **90 percent lower** than industry average
- As of Jan. 31, 2016, the project has completed 5,731,952 hours and 641 days without a lost-time accident

DEDICATED TO SAFETY EXCELLENCE
ACCIDENTS

VPP
Voluntary Protection Programs
An OSHA Cooperative Program

Current Project Staffing

- **Total project employment—868**
- **Richmond, Kentucky— 855**
  - Local hires— **25.2 percent**
- **Other locations—13**
  - Pasadena, California
  - San Francisco, California

A worker performs a Lock Out, Tag Out on a valve prior to a pipe flushing test in the Munitions Demilitarization Building. The valve is part of the Agent Neutralization System.

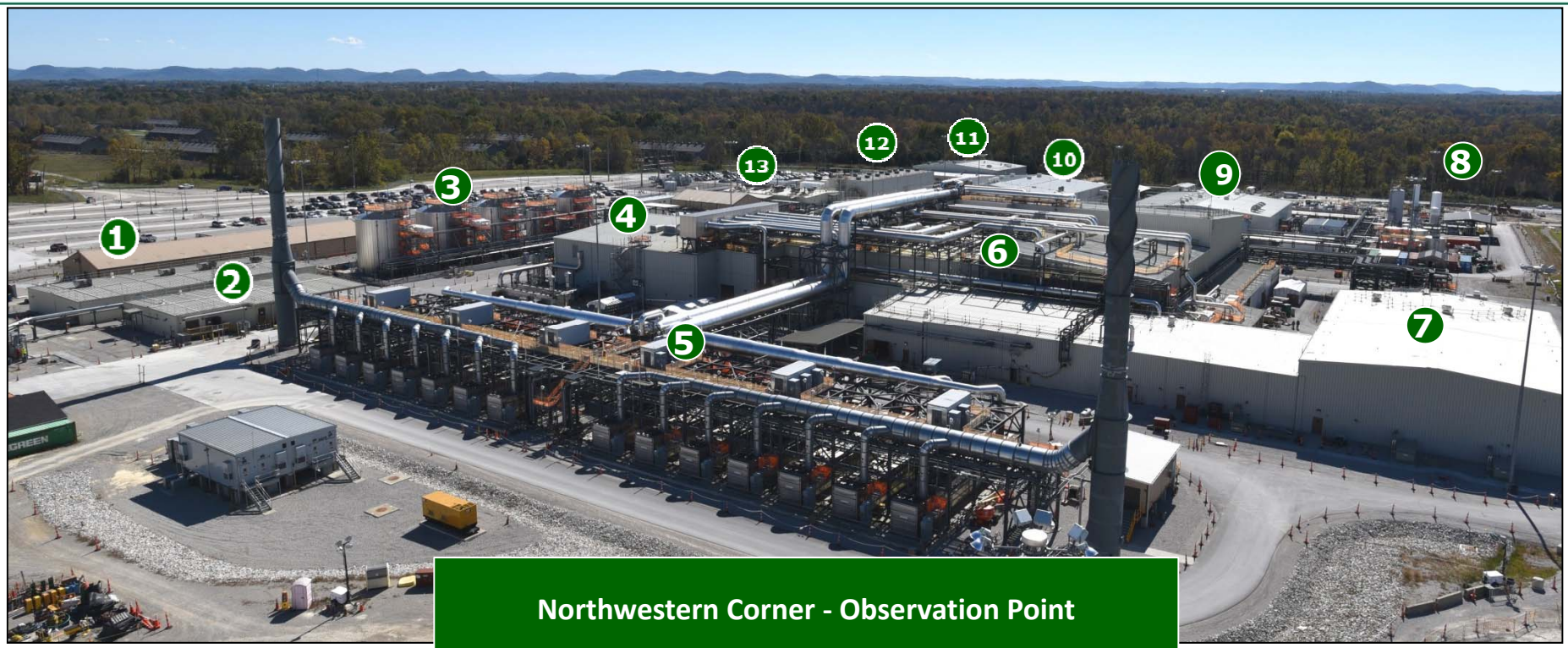
Economic Impact

- **Acquisitions to date**
  - $154.2 million spent with Kentucky companies
  - $90.4 million spent in Madison and surrounding counties
- **Payroll to date**
  (includes nonmanual and craft)
  - $803 million of local payroll paid

A neutralization team member decouples a cooling loop motor for the Energetics Batch Hydrolyzer inside the Munitions Demilitarization Building. The motor is decoupled prior to a test on the unit.

BGCAPP Progress

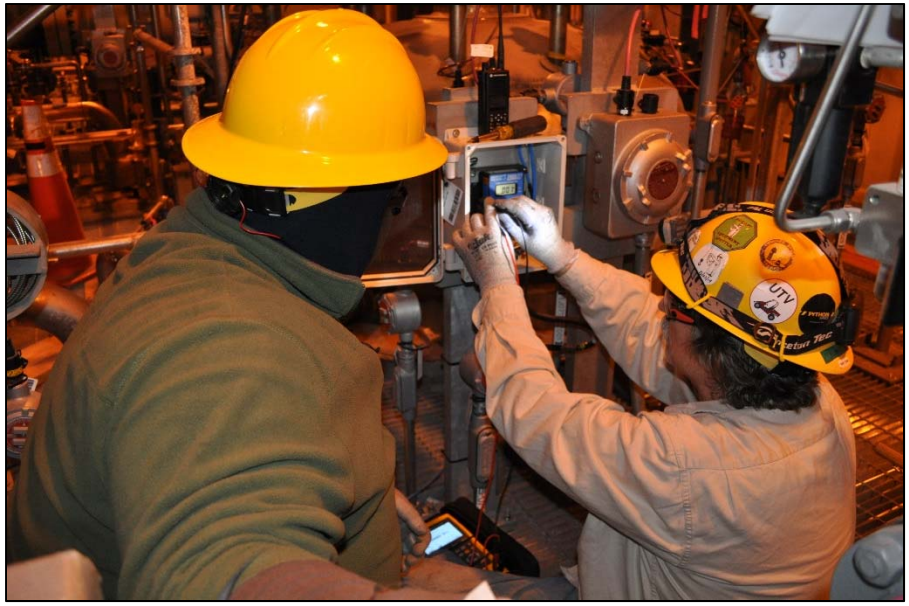
BGCAPP MONTHLY STATUS BRIEFING



Northwestern Corner - Observation Point

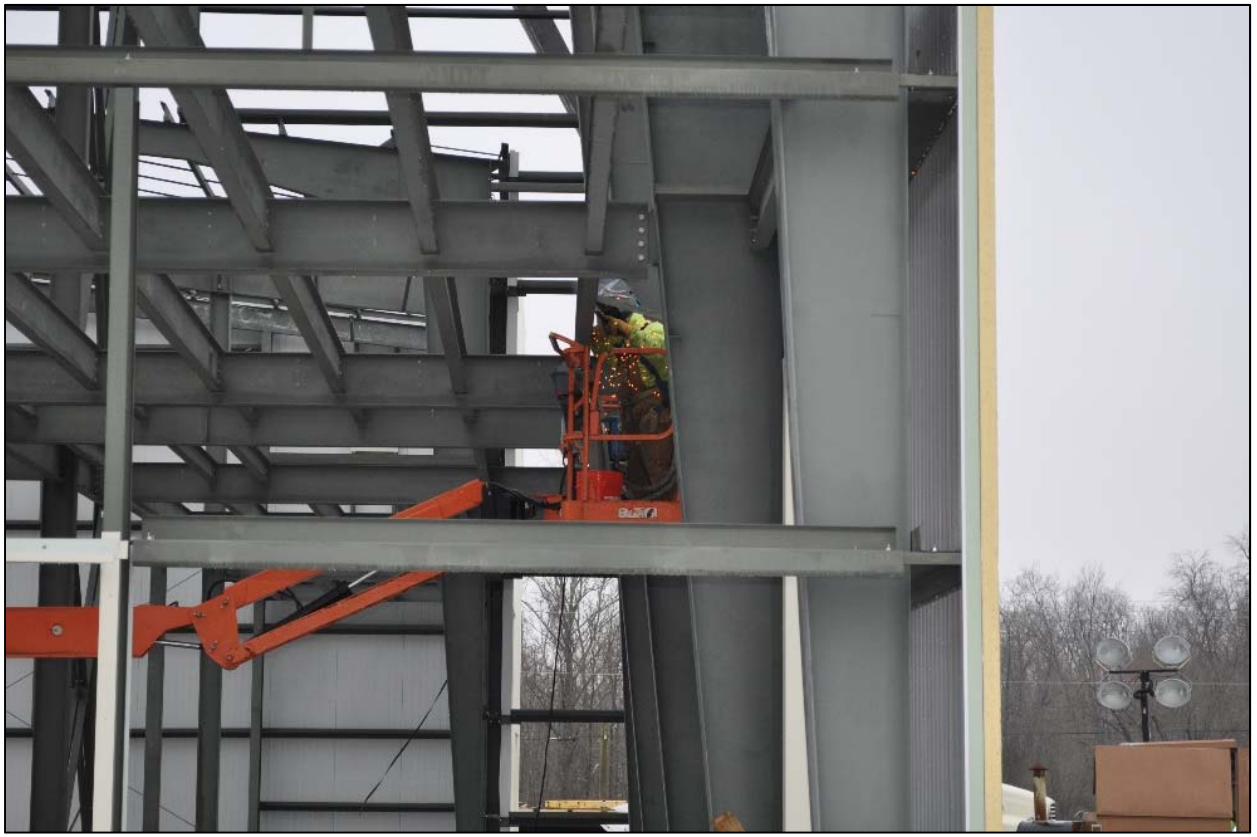
1. Personnel Maintenance Building
2. Medical Facility
3. Hydrolysate Storage Area
4. Control and Support Building
5. Munitions Demilitarization Building (MDB) Filter Banks
6. MDB
7. Container Handling Building
8. EDT Facility Site
9. Utility Building
10. Supercritical Water Oxidation Building
11. Maintenance Building
12. Personnel Support Building
13. Laboratory Building

Main Plant Progress: Systemization



Left: A systemization team conducts a continuity test on a switch that is part of the Agent Neutralization System inside the Munitions Demilitarization Building. Right: Members of the Demilitarization Startup team examine connections in a control panel that is a part of the Washout/Metal Parts Treater system. Main plant systemization efforts have reached 45 percent.

EDT Facility Site Progress



Contractors have installed insulated siding for the exterior of the Explosive Destruction Technology Enclosure Building (EEB). Above: An ironworker performs a weld on the steel frame of the EEB. Construction, receipt of materials and installation of equipment for the Explosive Destruction Technology Building now stands at 67 percent complete.

Stakeholder Involvement

Craig Williams, co-chair of the Chemical Destruction Community Advisory Board, left, and Rep. Rita Smart, D-Richmond, Kentucky, testify before the Kentucky House Natural Resources and Environment Committee on House Bill 106. The bill will create new waste codes for the by-products for the treatment processes at the Blue Grass Chemical Agent-Destruction Pilot Plant.

Community Involvement

Left: Dr. Marek Greer, medical director at the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP), discusses medical careers to high school students. Right: Steve Bragg, Explosive Destruction Technology manager, provides an oversight of the BGCAPP project. More than 800 high school juniors participated in the Madison County Business and Education Partnership Career Fair sponsored by Bechtel Parsons Blue Grass in February.

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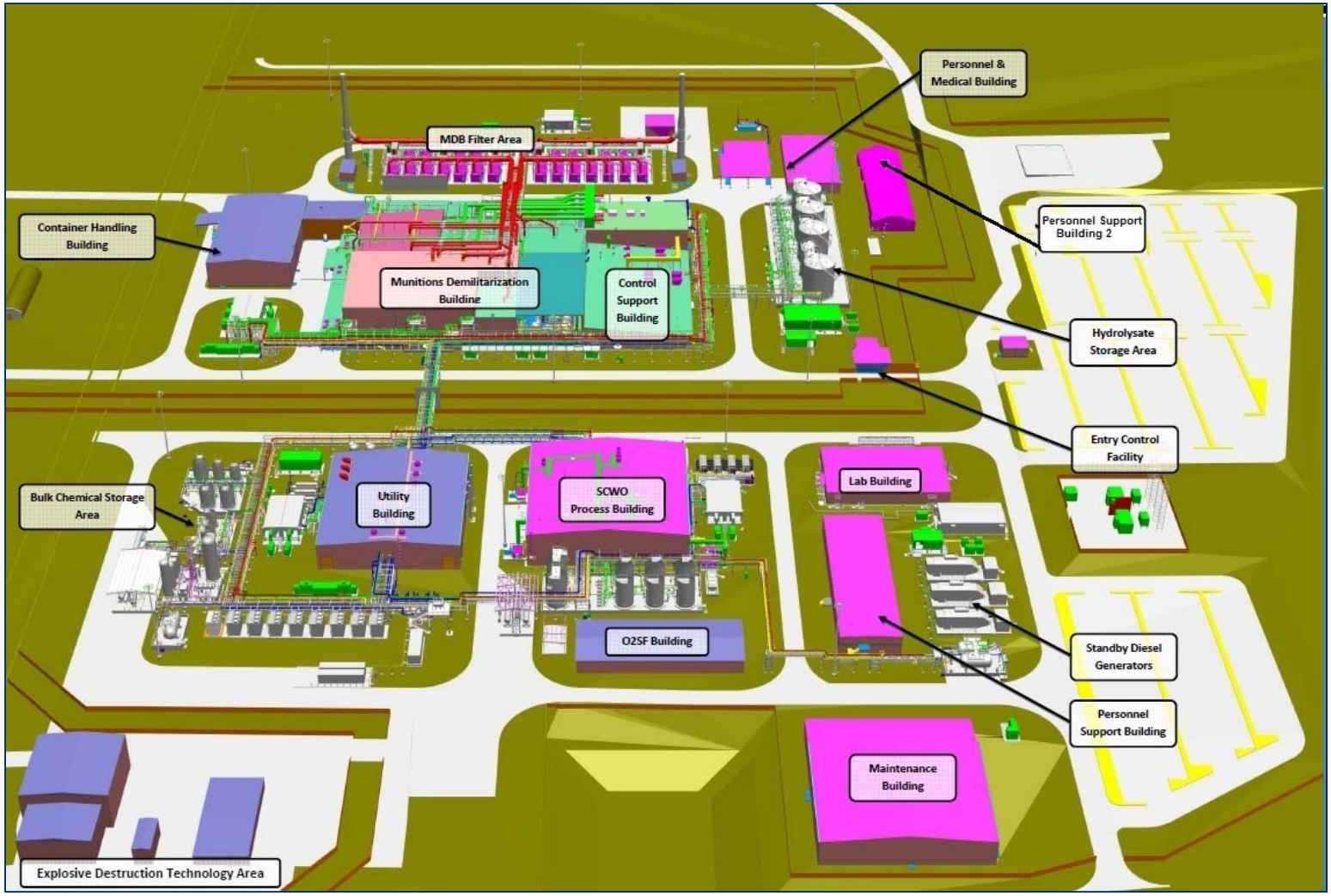

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