

# Monthly Status Briefing

*May 2015*



Pueblo Chemical Agent-Destruction Pilot Plant



Program Executive Office  
Assembled Chemical Weapons Alternatives



# PCAPP

Pueblo Chemical Agent-Destruction Pilot Plant

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



**A PARTNERSHIP FOR SAFE CHEMICAL WEAPONS DESTRUCTION**

# Project Background



The Program Executive Officer, Assembled Chemical Weapons Alternatives (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 Colorado and Kentucky.



The Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) will safely destroy 2,611 tons of mustard agent in mortar rounds and artillery projectiles stored at the U.S. Army Pueblo Chemical Depot (PCD).

- Neutralization followed by biotreatment is the technology selected by the Department of Defense to destroy the Pueblo chemical weapons stockpile.



The Bechtel Pueblo Team (BPT) is a partnership of Bechtel National, Inc., AECOM, Parsons, and Battelle Memorial Institute. The BPT functions as the systems contractor selected to design, build, systemize, pilot test, operate, and close the PCAPP.



## Bechtel Pueblo Team: **1,237**

- Pueblo County local hires: 365
- Colorado hires (outside Pueblo County): 114
- From other locations: 758

# Employment Opportunities



## Hotline

(719)549-4003

## Website

<http://pueblo.bechtel.com>

- *Star Status* granted in the Dept. of Labor's Occupational Health and Safety Administration's Voluntary Protection Plan
- Lost-workday case rate and total recordable injury rate (TRIR) is **0.07**
- The current TRIR for the YTD is well below the general industry average of **3.5** and the Waste Management Industry rate of **4.7**



PCAPP was certified as a VPP Worksite on April 28, 2015

## Step 1



### Removal of Energetics

Robotic equipment removes energetics (explosives) from the weapon. The energetics will be disposed of at a permitted facility offsite.

## Step 2



### Removal of Mustard Agent

The inside of the weapon is remotely accessed and mustard agent is washed out with high-pressure water.

## Step 3



### Neutralization of Mustard Agent

The mustard agent is neutralized with caustic solution and hot water. The byproduct is called hydrolysate.

## Step 4



### Biotreatment

Microbes treat the hydrolysate, breaking it down into brine. The brine is separated with water being recycled back to the plant and salt cakes shipped for disposal at a permitted facility.

## Step 5



### Thermal Treatment and Disposal of Metal Parts

Metal Parts are heated to 1,000 degrees Fahrenheit for 15 minutes and can then be recycled.

**Neutralization followed by biotreatment will be used to destroy the Colorado chemical weapons stockpile.**

# Explosive Destruction System

As of 08 May 2015, EDS has destroyed 10 DOT bottles and 87 105mm projectiles



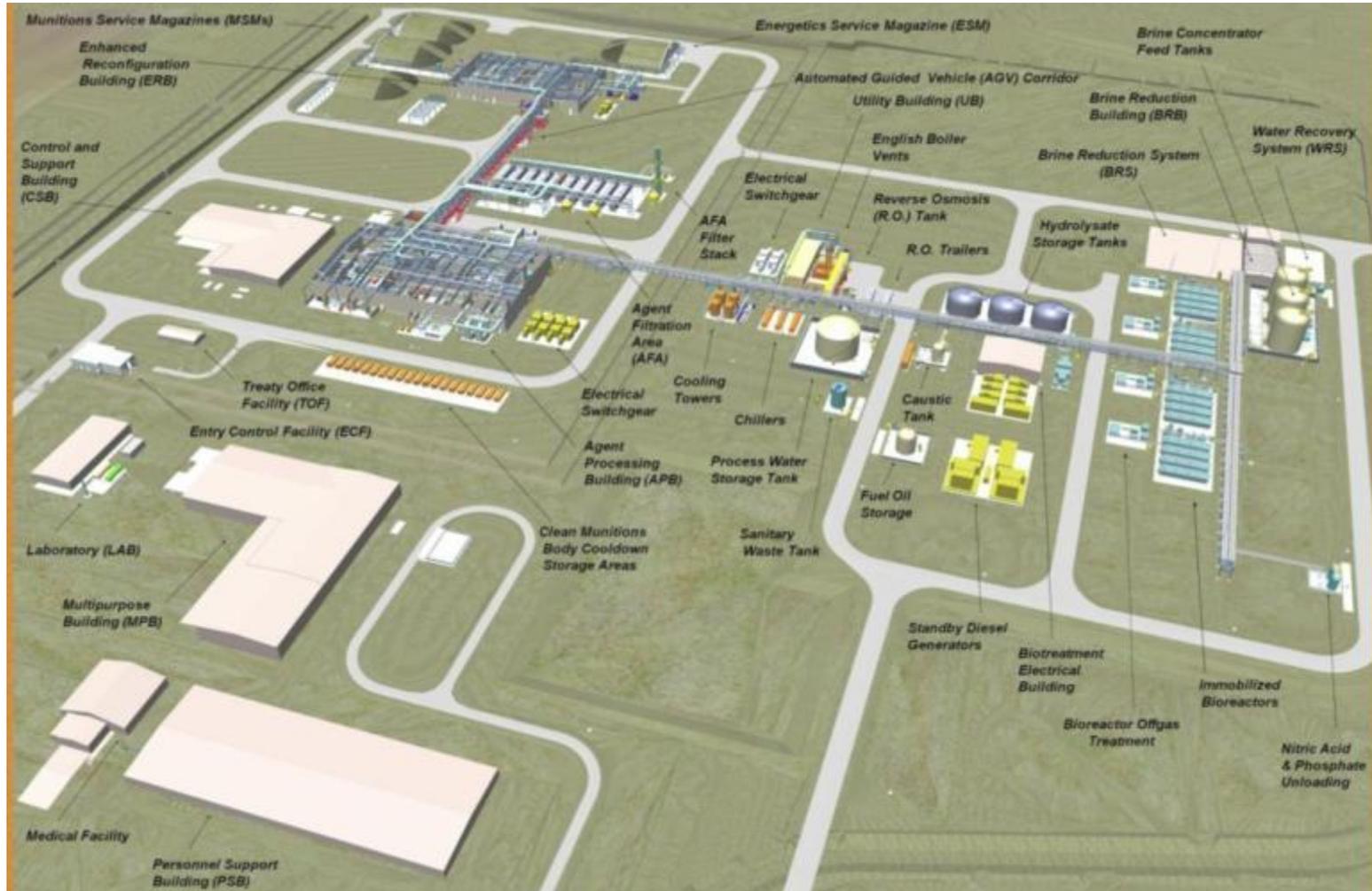
- EDS uses explosive “cutting” charges to access the chemical agent inside a munition; neutralization chemicals are then added to destroy the chemical agent

- The Army’s Explosive Destruction System (EDS) is augmenting the Pueblo pilot plant’s automated destruction technology
- EDS is being used to destroy problematic munitions that are unsuited for automated processing



March 18, 2015 – The first mustard agent from the Pueblo stockpile to be destroyed is loaded into the EDS.

# Pueblo Chemical Agent-Destruction Pilot Plant—Site Plan



# PCAPP Site Overview



Northwestern Corner - Observation Point

- |          |  |          |  |
|----------|--|----------|--|
| <b>1</b> | <b>Enhanced Reconfiguration Building</b> | <b>5</b> | <b>Agent Filtration Area</b>               |
| <b>2</b> | <b>Automated Guided Vehicle Corridor</b> | <b>6</b> | <b>Munitions Service Magazine</b>          |
| <b>3</b> | <b>Agent Processing Building</b>         | <b>7</b> | <b>Control and Support Building</b>        |
| <b>4</b> | <b>Biotreatment Area</b>                 | <b>8</b> | <b>Munitions Service Magazine Corridor</b> |

# Turnover to Operations

**As the project transitions from systemization to operations, the following systems have been turned over:**

## **Systems**

Toxic Storage and Spent Decon

Bulk Chemical Storage and Distribution

Security Essential Power Supply

Laboratory Ventilation System

Site Water System

Chilled Water System

Reverse Osmosis System

Process Water System

Instrument Air and Plant Air

Natural Gas

Fuel Oil System

Sanitary Waste

Enhanced Reconfiguration Building/Agent

Processing Building Material Handling Systems

Munitions Unpacking and Projectile Disassembly

Lighting System

Steam and Condensate System

Breathing Air System

Communications System/CCTV

Residue Handling

Munitions Washout System



To learn more about Systemization, watch the video at  
[http://www.peoacwa.army.mil/info/video/systemization\\_yt.html](http://www.peoacwa.army.mil/info/video/systemization_yt.html)

# Turnover to Operations

**As the project transitions from systemization to operations, the following facilities have been turned over:**

## **Facilities**

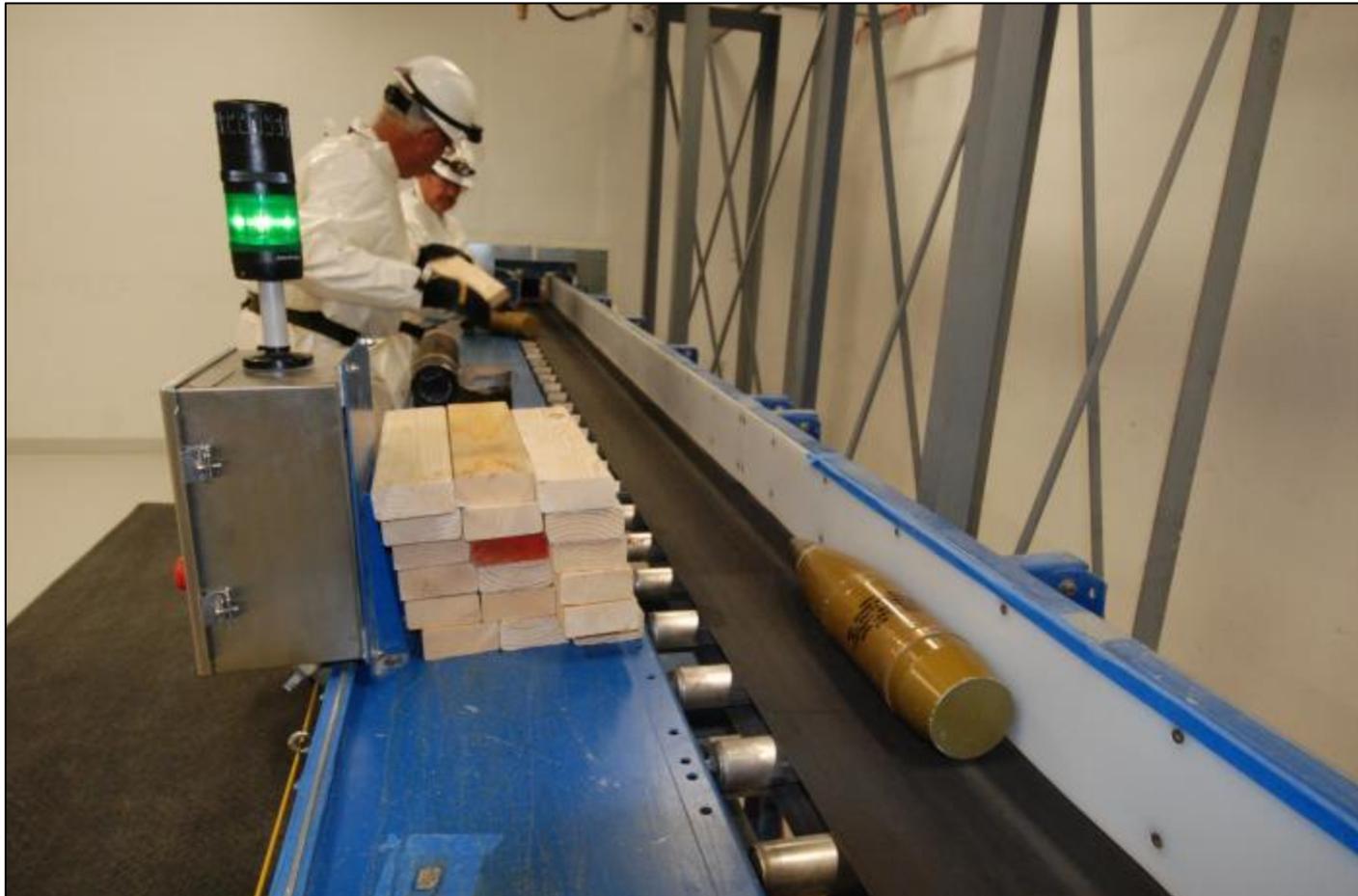
Biotreatment Electrical Building  
Brine Reduction System Facility  
Analytical Laboratory  
Medical Facility  
Multipurpose Building  
Personnel Support Facility  
Utility Building  
Control and Support Building  
Entry Control Facility  
Munitions & Energetics Service Magazines  
Treaty Office\*

\*Newly added



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# Vapor Containment Room



**Ordnance technicians monitor ACWA Test Equipment, or ATE, as they go down the conveyor from a Vapor Containment Room. The inert munitions are used for practice as the plant prepares for operations.**

# Preparing for Operations



**Ordnance Technicians in the Agent Processing Building, one of two main processing facilities, prepare ATE munitions for testing the lift assists and Munitions Washout System.**

# PCAPP CPR Heroes



**PCAPP employee Tom Hassing (second from right) was honored by Parkview Medical Center as a CPR Hero on April 21. Sharing in the honor (left to right) were PCAPP employees Joe Reno, Kurt Thompson, Wade Wills, Mike Whitmore, Wendell Savage, Dennis O’Hanlon, Kyle Hughes, Brian Jackson, [Hassing] and Dr. Stam, Parkview cardiac surgeon. They were credited for saving O’Hanlon’s life by performing CPR when he went into cardiac arrest while walking to the parking lot after work.**

# Homework Hotline



**PCAPP lab employee Mechelle Cass-Burrell (center) performs an experiment during the Homework Hotline program on the Rocky Mountain Public Broadcasting System.**

**PCAPP employees volunteer their time on the program, which encourages school age children to call in and ask teachers questions about their homework.**

# Contact Information



## **Pueblo Chemical Stockpile Outreach Office**

104 West B Street  
719-546-0400

### **Ron Eccher**

Public Outreach Manager

### **Tom Schultz**

PCAPP

Public Affairs Specialist

### **Sandy Romero**

Bechtel Pueblo Team  
Communications Manager

## **U.S. Army Pueblo Chemical Depot**

45825 Highway 96 East  
719-549-4135

### **Lori Waters**

Public Affairs Officer



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