

# Monthly Status Briefing

*July 2010*



Pueblo Chemical Agent-Destruction Pilot Plant

**PCAPP**  
Pueblo Chemical  
Agent-Destruction Pilot Plant

A PARTNERSHIP FOR SAFE CHEMICAL WEAPONS DESTRUCTION

# Project Background



- 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.
- Neutralization followed by biotreatment is the technology selected by the Department of Defense to destroy the Pueblo chemical weapons stockpile.
- The Program Manager, 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 Bechtel Pueblo Team (BPT) is a partnership of Bechtel National, Inc., URS, 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



## Systems Contractor

- Project management
- Business services
- Safety and quality



- Design/engineering
- Procurement/subcontracting
- Construction

## Teaming Subcontractors



- Systemization
- Pilot testing
- Operations
- Closure



- Process design
- Process equipment fabrication
- Support to systemization and operations



- Environmental permitting and compliance
- Laboratory management
- Pilot testing



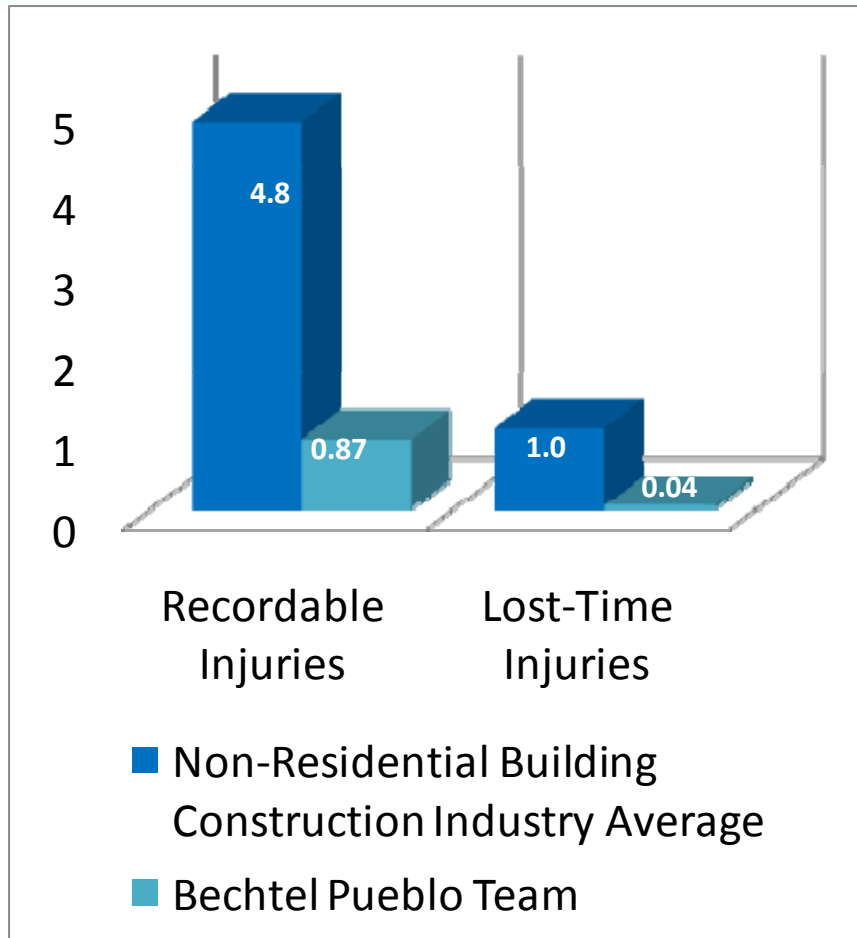
# Staffing

- Bechtel Pueblo Team non-manual: **381**
  - Pueblo: 377 (118 local hires)
  - Other locations: 4
- Construction Workers:
  - Bechtel direct-hire: 360
  - Subcontractor personnel: 98





# Safety



As of June 30, 2010, PCAPP Project staff have accomplished:

- 616 Safe Work Days
- 2,189,621 Safe Work Hours



The industry average, provided by the Bureau of Labor Statistics, is based on accidents per 200,000 job hours.

# Subcontract Awards

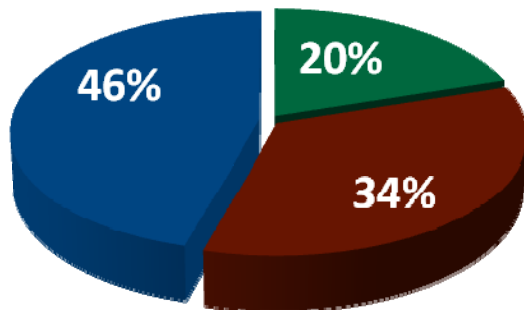
## Inception to date, as of June 30

**\$390.4 Million**

\$ 78 Million to Pueblo County Businesses (20%)

\$134 Million to Colorado Businesses (Outside Pueblo County, 34%)

\$178.4 Million to Businesses Outside Colorado (46%)



- Pueblo County
- Colorado
- Outside Colorado



# Acquisition Awards Status

## FY 2010 Upcoming Request for Proposals

### Materials

- Misc. construction and architectural materials
- Public address/general alarm system
- Tank agitators
- Treaty trailer facilities
- Misc. piping items

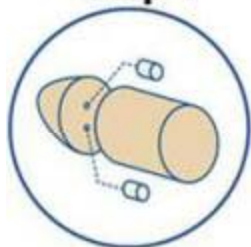
### Subcontracts

- Piping equipment and heat tracing
- Enhanced Reconfiguration Building membrane roof liner
- Chemical limited area security fencing
- Asphaltting



# Destruction Technology

## Step 1



### REMOVAL OF ENERGETICS

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

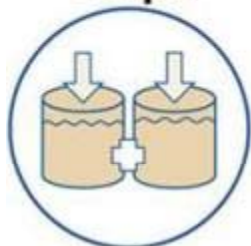
## Step 2



### REMOVAL OF MUSTARD AGENT

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

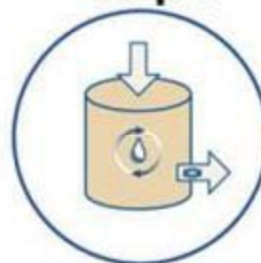
## Step 3



### NEUTRALIZATION OF MUSTARD AGENT

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

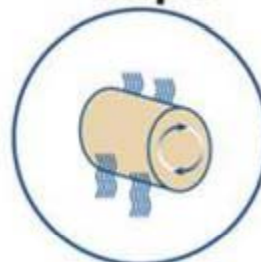
## Step 4



### BIOTREATMENT

The hydrolysate is treated with microbes that break down the solution into water and biosludge. Water is recycled in the plant, and biosludge is shipped for disposal at a permitted facility.

## Step 5



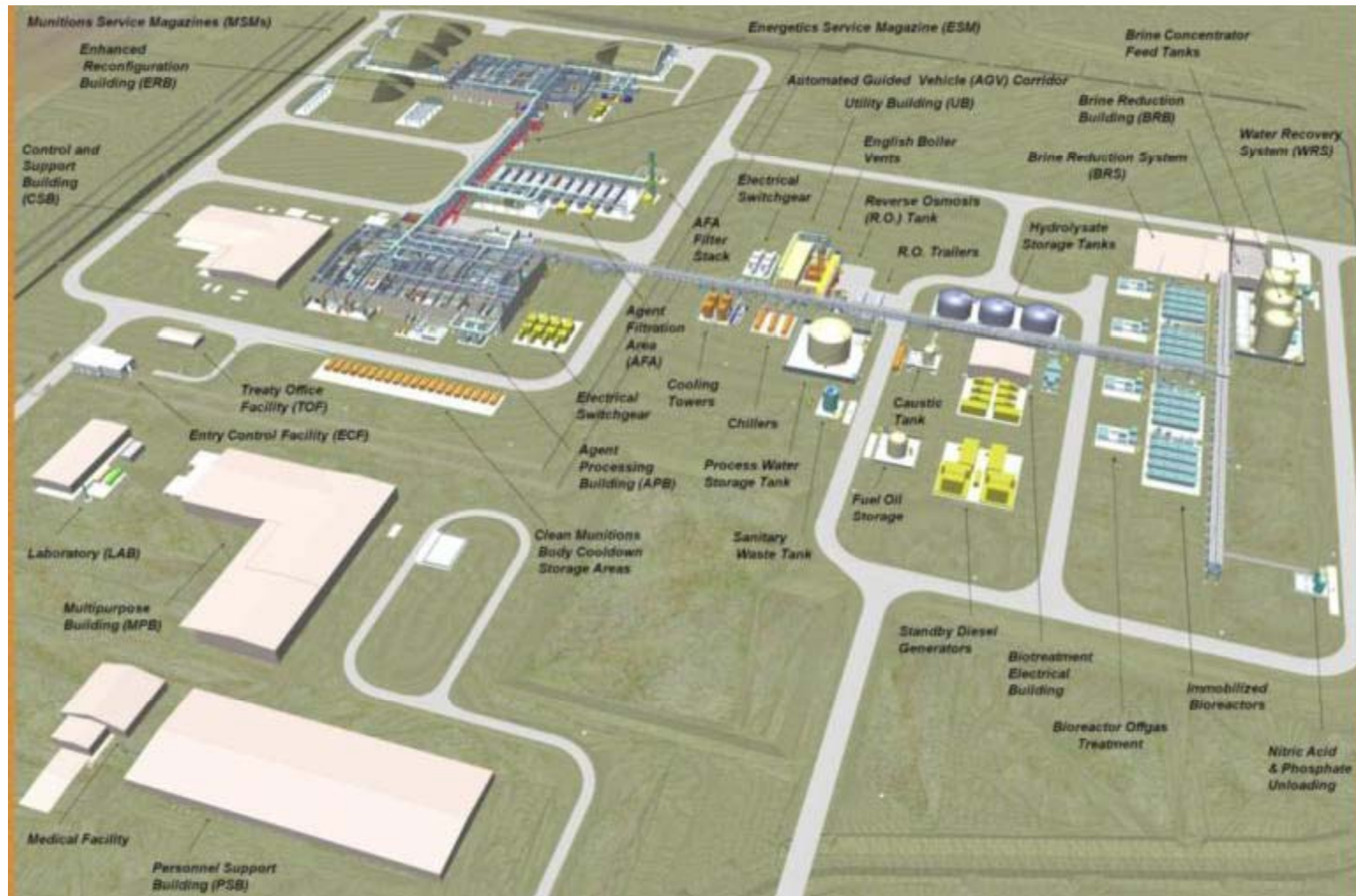
### DISPOSAL OF METAL PARTS

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.**



# 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>Air 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>Energetics Service Magazine</b>  |



# Construction Status – Complete

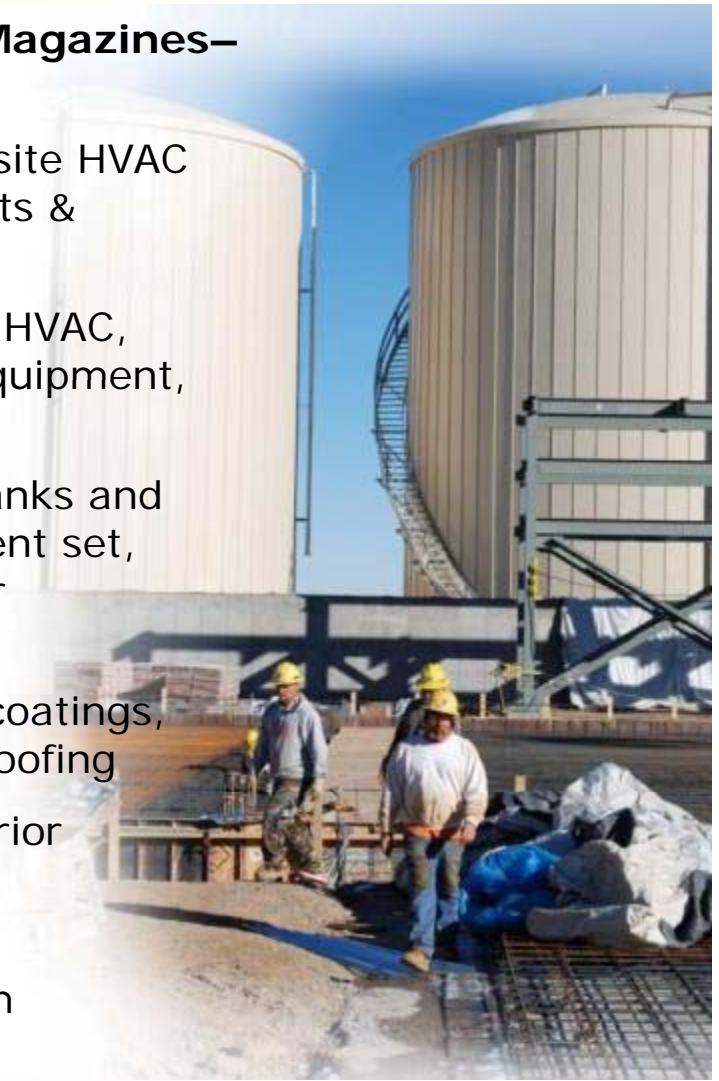
- Pre-cast concrete arches for the munitions and energetic service magazines
- Concrete masonry unit walls in the Agent Processing Building
- Entry Control Facility exterior concrete masonry unit walls
- Standby diesel generator foundation
- Immobilized Cell Bioreactor concrete foundation, pads and curbs
- Brine Tank containment walls





# Construction Status – In Progress

- **Energetic Service Magazine & Munitions Service Magazines**—backfilling, siding and roofing of corridors
- **Enhanced Reconfiguration Building**—interior composite HVAC (interior and exterior), walls/roof, electrical tray/conduits & equipment set, process piping, mechanical equipment
- **Agent Processing Building**—Misc. platform erection, HVAC, cable tray, process piping, electrical and mechanical equipment, wall/floor coatings & composite walls
- **Balance of Facilities**—cable tray, underground duct banks and supports, pipe rack piping, various mechanical equipment set, misc. concrete equipment foundations, diesel generator assembly, G-block entrance (roads and gates)
- **Subcontractors**—HVAC, fire protection, architectural, coatings, insulation, Chemical Limited Area fencing, membrane roofing
- **Control Support Building**—HVAC, fire protection, interior wall framing, architectural finishes, electrical systems/ equipment & fire protection
- **System turnover**—Electrical power distribution system





# Agent Processing Building



An electrician prepares conduit for electrical cable inside the Agent Processing Building.

# Enhanced Reconfiguration Building



Piping, electrical work and structural steel make up the explosion containment rooms discharge area.

# Energetic Service Magazine Corridor Enclosure



Workers install roof panels atop the Energetic Service Magazine corridor.



# Munitions Service Magazines



Structural steel outlines the corridor to the munitions service magazines.



# Munitions Service Magazines



Workers install formwork on one of the Munitions Service Magazines.

# Utility Area



Two filter stacks from the boilers will provide heat to the entire facility.

# Utility Area



A base plate for the standby diesel generator is off-loaded in the utility area.

# Contact Information



## **Pueblo Chemical Stockpile Outreach Office**

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PCAPP

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### **Bob Kennemer**

Community Outreach  
Manager

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### **Chuck Sprague**

Public Affairs Officer

### **Ken Roque**

Deputy Public Affairs Officer



U.S. Army Element, Accredited  
Chemical Weapons Alternation



Pueblo Chemical Agent  
Destruction Plant East