Pantex prehistory archeological site

- 7,100 acres survey for archeological sites
- 69 archeological sites recorded
- 12 Pre-World War II
- 57 prehistoric lithic scattered sites
Prehistoric bison bones

A Pantex geologist discovered these old bones poking out of the earth in a small drainage channel on the plant grounds.
Site layout

- Department of Energy (DOE) owns northern 12,000 acres, leases remaining 6,000 acres from Texas Tech University
- Most plant operations conducted in 622 buildings on ≈ 2,000 acres
- Five DOE wind turbines produce the equivalent of 60 percent of plant electricity
1942 – World War II

- Constructed in 1942 on 16,000 acres
- 17,500 acres today
- Last of 14 bomb-loading plants constructed during WWII
- Amarillo Air Force Base, 1941-1968
1942-1945 – World War II

• Three active load lines
  • 250-lb bombs (116,060)
  • 500-lb bombs (1,978,285)
  • 23-lb bombs (1,961,391)
  • 105-mm shells (6,035,008)

• Peak employment – 5,254 (60 percent female)

• M&O contractor
  Certain-Teed Products Corporation

• Pantex Village (1943-1968)
1945 – World War II

• August 6, 1945 - Little Boy
• August 9, 1945 - Fat Man
PEACE! IT'S OVER

WASHINGTON, Aug. 14.—(AP)—Japan surrendered unconditionally tonight. History's most destructive war is over except for formalities.

President Truman released the stirring news at 7 p.m., Eastern Time.

Arrangements still must be completed for the signing of formal surrender terms. General Douglas MacArthur has been appointed supreme Allied commander to receive the surrender. Then V-J day will be proclaimed.

"Meantime," the President announced, "the Allied armed forces have been ordered to suspend offensive action."

In addition, he announced plans for the world to celebrate with slashing army draft calls from 80,000 to

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For millions of Americans, for hundreds of millions of Allied people, his surrender announcement signified victory, peace, and the eventual return of loved ones from the war. To them, beneath a stark white meant their sacrifices had been.

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August 15, 1945
1947-1949 – Texas Tech University

• War Assets Administration
  • 1947 - Deeded 8,000 acres to Texas Tech University for agricultural experiment station
  • 1949 – Deeded remaining 8,000 acres
  • Price was $1 with a recapture clause
1946 – Atomic Energy Act

- Atomic Energy Commission (AEC) takes over January 1, 1947
- AEC answers to Joint Committee on Atomic Energy (JCAE)
- AEC Inherits “Manhattan Project” Sites
  - Hanford
  - Oak Ridge
  - Los Alamos
1948-1952 – Truman Administration

- Truman decision to rely on nuclear weapons
- Truman decision to build the “Super”
- Bulk of the Nuclear Weapons Complex (NWC) authorized and/or constructed
1948-1952 – Truman Administration

- National Security Council (NSC)-68 lays the foundation
- Korean War provides the motivation
Cold War arms race

Stockpile Milestones

1951 – AEC reclaims Pantex

- High Explosives (HE) fabrication
- Zone 12
- Common-wall bays
- Melt / cast HE process
- Procter & Gamble Defense Corporation
1951 – AEC reclaims Pantex

Pantex Plant’s Primary Role within the Nuclear Weapon Complex is Outlined in the Shape of Texas

Manufacturing Work Flow

Design to Stockpile Sequence

NTS

Weapon Life Cycle
1956 – Sealed pit design

• New weapon design
• New M&O contractor
  • Mason & Hanger Corporation
• New facility design
1956 – Gravel Gerties

- Designed to minimize spread of nuclear material in the unlikely event of an accidental High Explosives detonation
1960 – New Mission

High Explosives development

• Melt / cast to press / machine
• Drive for lighter and smaller

Zones 11 and 12 - 1959
1965-1966 – AEC consolidation

- Clarksville and Medina modification centers closed
- In-Flight Insertable programs dismantled
- New production slowing
- Surveillance mission to Pantex
Weapon lifecycle – surveillance
1970 – Separated bay design

- Common-wall bays used since 1951
- Isolated or separated bay design created in 1970
1975 – AEC consolidation

- AEC portion of Burlington plant closed
1987 – Last railcar shipment

- 1951-1976 – rail only
- 1987-present – trailer only
1991 – Mission shift to disassembly

- End of the Cold War
- Bush speech on unilateral dismantlement
- Focus on disassembly, not assembly
February 1, 2001 – New M&O Contractor

Pantex employees were greeted as they entered the plant Feb. 1 by members of the BWXT Pantex management team. As each stopped at the guard station, one of the new managers was there with his hand out to introduce himself and personally invite them to a pancake breakfast the next day.

BWXT Pantex planned the events so the new management team could meet as many employees as possible.

"We wanted to do something special to let the employees know that they are important and happy to be here." - Dan Glenn, Area Manager for BWXT Pantex.

Above, BWXT Pantex held a special ribbon cutting ceremony and reception to celebrate its first day as the Contractor for Pantex Plant. DOE Amarillo Area Manager Dan Glenn, left, Amarillo Mayor Kim Seliger, Pantex General Manager Denny Rudd, and Employees Mike Mallory, Deputy General Manager Glenn and Rudd gathered to unveil the new management team.
July 1, 2014 – New M&O contractor

- Project Management
- Construction
- Operations

- Security
- Safeguarding Special Nuclear Material

- High Explosives
- High-Hazard Operations

- Operations
- Information Technology
- Supply Chain Management

- Transformation
- Cost Savings
Pantex missions

ALL ROADS LEAD TO PANTEX

National Security
- Safeguards & Security
- Non-Proliferation
- Stewardship
- Environmental
- Infrastructure
- Human Capital
- Energy

Nuclear Explosive Operations
- Life Extension
- Surveillance
- Dismantlement

Nuclear Material Operations
- Storage
- Surveillance
- Reuse / Requalification

High Explosive Operations
- Manufacturing
- Surveillance
- Testing
Programs
Weapons assembly

- Joint test assemblies
- Test beds
- Modifications
- Repairs
- Surveillance rebuilds
Weapons disassembly

• Disassemble nuclear weapons retired from the stockpile
Disassembled B61
Weapons maintenance, modification, and evaluation
High Explosive Center of Excellence

- Pantex Plant was selected by the National Nuclear Security Administration (NNSA) as the High Explosive Center of Excellence
Fabrication of high explosives

- Research
- Development
- Fabrication
- Testing
Sanitization of components

- Removal of classified / sensitive information and proliferation concerns
External oversight

- Environmental Protection Agency (EPA)
- Texas Commission on Environmental Quality (TCEQ)
- Texas Bureau of Radiation Control (TBRC)
- Defense Nuclear Facilities Safety Board (DNFSB)
- NNSA Production Office (NPO)
Nuclear Safety Culture

• Employees stop work when faced with uncertain conditions
• Managers support the decision to stop work and help evaluate the situation
The future

The mission of the Pantex Plant promises to be an enduring one as dwindling worldwide stockpiles of nuclear weapons demand increased reliability to maintain the security of the United States through a credible nuclear deterrent.
Questions?
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