Special Nuclear Material Component Requalification Facility –
DNFSB 23 August 2003 – "This project will implement various non-destructive examination techniques, as well as a pit tube replacement capability, in existing facitities. Pit tube replacement will require work in a glove box environment."
DNFSB 4 July 2003 – hazard analysis – maximum facility inventory of 390 kg Pu.
DNFSB 9 April 2004 – activities include cleaning, leak testing, weighing, gas sampling, tube replacement, internal gas exchange, and various other inspections. Specially designed workstations with glovebox enclosures will be used for some of the operations. Construction due to be complete by end of year and start up 2006.
DNFSB 15 December 2006 – Contractor Operational Readiness Review completed.
DNFSB 27 April 2007 – Completed processing first 3 W76 pits through the ten workstations needed to requalify them for Mod-1 production. Data from first 8 pits will be sent to LANL for evaluation and if acceptable a Qualification Evaluation Release will be issued to authorize the process to go into unrestricted production.
DNFSB 25 May 2007 – Evaluation of the process prove-in lot of 8 pits has been completed. QER expected early June

RECYCLING NUCLEAR WEAPONS

AMARILLO (*Amarillo Globe-News*) - A new $19.8 million Pantex facility here will recycle nuclear weapons. The Special Nuclear Material Component Requalification Facility will recertify plutonium weapon cores from dismantled nuclear weapons to be reused in refurbished warheads.

The facility will use a series of workstations to modernize plutonium pits, the radioactive cores from warheads. Experts say that "requalifying" pits is significantly cheaper than building new ones.

Provided Photo
The Special Nuclear Material Component Requalification Facility is designed to test the core of a nuclear weapon, known as a pit, to ensure viability. The pit must undergo a series of quality checks to ensure it is approved for use in the stockpile.

Provided Photo
A number of weapons components are returned to the Pantex Plant annually to undergo rigorous quality tests. These pieces of equipment perform a number of different tests on the pits.

A new $19.8 million Pantex facility will recertify plutonium weapons cores from dismantled nuclear weapons so they can be reused in refurbished warheads.
The Special Nuclear Material Component Requalification Facility will take plutonium pits, the radioactive cores of warheads, and run them through a

series of workstations so they can be used in modernized weapons.

The facility recently was authorized to begin its new mission and is now operational. The operation uses "nondestructive evaluation" procedures to recertify plutonium pits. Pantex workers take surface measurements, leak-test and weigh pits as part of the process.

The pits travel through several workstations, where they are cleaned, inspected and must meet other checks to ensure they meet original weapons lab design criteria.

A "war reserve" pit that has been requalified meets all quality checks, receives a special diamond stamp and is certified for nuclear weapons use. Pits that don't meet standards are stored and eventually will be reprocessed at other Energy Department facilities.

BWXT Manufacturing Division Manager Tom Gallegos said the facility required lots of planning and design work.

"First, you've got to design the equipment. We got the smart guys building the designs for it, including the software and whatever mechanical features associated with that," he said.

Then, the equipment had to be installed and utilities had to be hooked up to the facility.

Pantex recently completed several evaluations to ensure the operation was ready.

Gallegos said Pantex used mock components - dummy pits that are the same size and shapes as real ones - to test the workstations.

A recent report from the Defense Nuclear Facilities Safety Board, a watchdog nuclear agency, said the evaluation of the first lot of eight pits has been completed.

The evaluation data has been provided to Los Alamos National Laboratory, which is expected to authorize the process for unrestricted production this month, a DNFSB report said.

Energy Department reports said the facility could inspect up to 350 pits annually, but Gallegos said he anticipates the workload will be substantially less than that.

The DOE halted pit production at Colorado's Rocky Flats plant in 1989 because of environmental concerns. Since then, thousands of pits have been

shipped to Pantex, which now stores more than 14,000.

Gallegos said the Pantex facility is "contamination-free" and doesn't generate new streams of radioactive waste. Requalifying pits, he said, is significantly cheaper than building new ones at Los Alamos, which is now producing small numbers of pits for the stockpile.

"It is a tremendous cost savings for the government," Gallegos said.