FINAL

DOE/EA-1613

U.S. DEPARTMENT OF ENERGY

National Nuclear Security Administration

ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED HIGH EXPLOSIVE PRESSING FACILITY

PANTEX PLANT * AMARILLO, TEXAS * JUNE 2008

CONTENTS

FIGURES

TABLES

ACRONYMS

AAI	Actions in the Area of Influence
CFR	Code of Federal Regulations
dBA	decibels A-weighted
DOE	Department of Energy
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESLs	Effect Screening Levels
FHA	Fire Hazard Analysis
FMs	Farm-to-Market Roads
HE	High Explosive
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NNSA	National Nuclear Security Administration
HPFL	High Pressure Fire Loop
PHA	Process Hazard Analysis
ROD	Record of Decision
SHPO	State Historic Preservation Office
SWEIS	Site-Wide Environmental Impact Statement
TL4	Threat Level 4
TPDES	Texas Pollution Discharge Elimination System
TTU	Texas Tech University

1.0 INTRODUCTION

The National Environmental Policy Act (NEPA) requires Federal agency officials to consider the environmental consequences of their proposed actions before decisions are made. In complying with NEPA, the Department of Energy's (DOE's) National Nuclear Security Administration (NNSA) follows the Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1508) and DOE's NEPA-implementing procedures (10 CFR 1021). The purpose of an environmental assessment (EA) is to provide federal decision makers with sufficient evidence and analysis to determine whether to prepare an environmental impact statement or issue a Finding of No Significant Impact.

2.0 BACKGROUND

2.1 Alternatives

2.1.1 Preferred Alternative

The preferred alternative is to construct a new facility that would consolidate current Pantex high explosive (HE) pressing activities into one facility. This proposed pressing complex would efficiently combine HE inspection, machining, staging, pressing, and HE radiography. The proposed 45,000 square foot facility would be constructed of concrete and steel adjacent to an industrial zone within the fence of the Limited Area. See Figures 1 and 2.

This proposed facility generally includes construction of:

- Administrative Office Area, Break Room, and Restrooms: Non-explosive areas that incorporate standard industrial construction materials and details
- Main Pressing Bays and Control Areas: Explosive areas that incorporate heavily reinforced concrete common wall materials and details
- Ovens/Buildup Bays: Explosive areas that incorporate heavily reinforced concrete common wall construction materials and details
- Staging and Inspection Bays: Explosive areas that incorporate heavily reinforced concrete common wall construction materials and details
- Rough Cut Machining and Staging Bays: Explosive areas that incorporate heavily reinforced concrete common wall construction materials and details
- Tool crib and storage areas: Non-explosives areas that incorporate standard industrial construction materials and details
- Mechanical/Electrical Support Areas: Non-explosives areas that incorporate standard industrial construction materials and details with the mechanical area on the second floor
- Magazine Staging Areas: Explosive areas that incorporate earth berm-building details
- All Weather Ramp and Receiving area: Transient explosive movement and receiving areas that incorporate pre-engineered building details. The enclosed ramp would connect the magazine storage area and pressing facility.

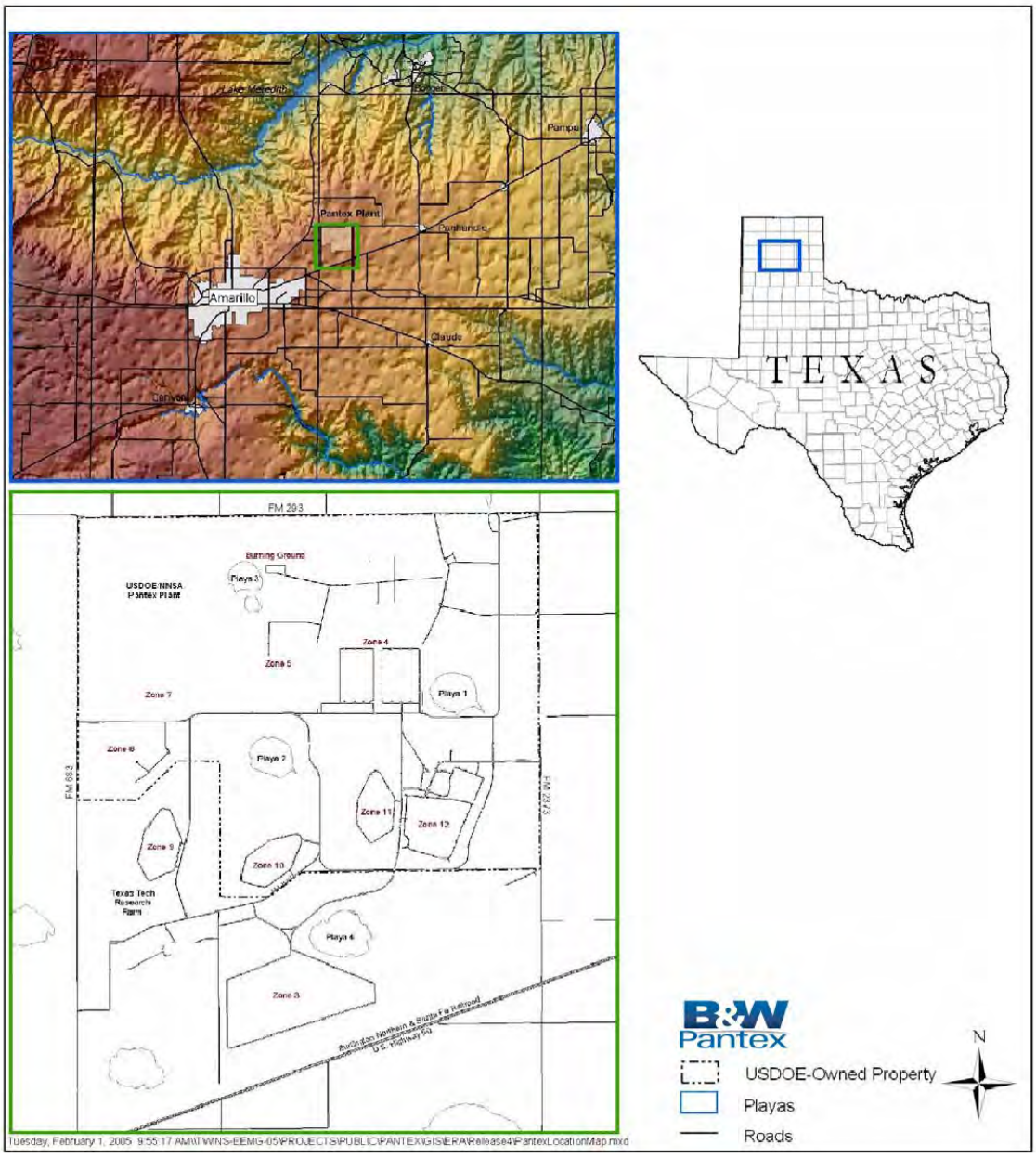

Figure 1. Location of Pantex and Key Areas

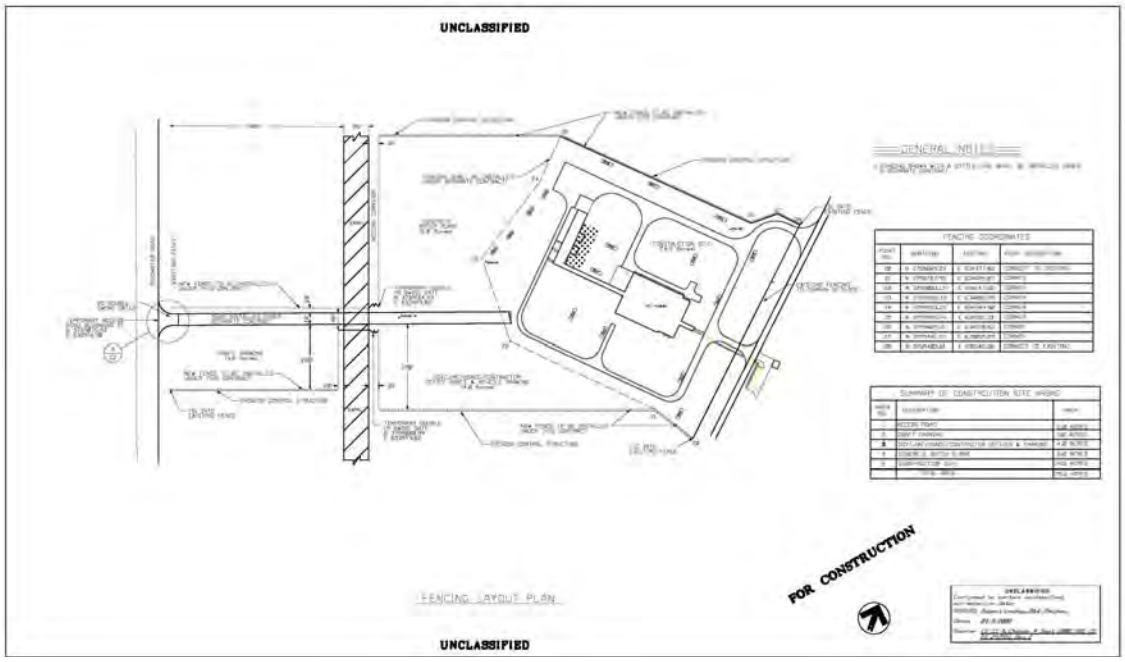

Figure 2. Layout of Proposed Facility

The approximately 30-acre area proposed for construction would be impacted by a soil stockpiling area, an area for the entering and exiting of construction vehicles, an area for additional construction equipment, a laydown area, an access road, a temporary construction fence, a temporary concrete batch plant, and the proposed HE Pressing Facility.

The temporary concrete batch plant would be placed within the construction zone to supply concrete elements of the proposed facility. The proposed batch plant would be constructed mostly of steel and a structural steel framework, and is anticipated to produce less than 300 cubic yards of concrete per hour. Any surface water or wastewater would be controlled by berming to contain all storm water. All environmental pre-construction permitting would be achieved, and site operators/sub-contractors would implement and maintain all required control measures during the project.

The contractor would prepare a Waste Management Plan for Pantex Plant approval. Portable toilets would be provided for construction personnel. Onsite fuel storage would meet the requirements for size and capacity of fuel tanks/containers. The contractor would comply with the requirements of the Pantex Plant Mass Specifications-Division I for secondary containment and any fuel spills.

2.2 No Action Alternative

No new facility would be constructed. HE Pressing activities would be adversely affected by increasing shutdowns for maintenance of the aging infrastructure. Consolidation of existing operations, with accompanying savings in energy use and savings in the cost of maintaining operations, would not be realized.

2.2.1 Other Alternatives

The following alternatives were considered but rejected because they did not meet the purpose and need of the project to provide HE pressing and machining capability and capacity for projected future workload. Other alternatives would not have improved safety, quality, and productivity, and so were not considered feasible, as determined by the study, *Preliminary Design Report for H. E. Modernization High Explosive Pressing Facility*, Site Planning Department, B&W Pantex, October 2003.

- Use Other Existing Facilities – Increase in safety and reduction in costs not met: Engineering and safety demands related to a main charge pressing facility preclude the option of retrofitting existing buildings not originally designed for these operations without excessive construction investment.

- Temporary Buildings – Safety and productivity requirements are not met: Temporary buildings are not built as structurally sound as permanent buildings, and would require higher maintenance that could likely force the pressing operations to shutdown while repairing the structure(s)

- Replace Existing Press – The old press would be shutdown, removed and a new one installed. The replacement of the press could take up to several years. This approach imposes a single press production limitation on the plant in the midst of the greatest capacity/schedule for program support. With this option, there would not be a backup press capable of supporting the NNSA production schedule and the single point failure mode would continue to threaten pressing operations. This is not a practical option.

Since none of these alternatives are reasonable for accomplishing the purpose and need of the project (see Section 2.3 below), they are not analyzed further.

The following table provides a quick reference for comparing the alternatives:

Table 1. Alternative Comparison Reference

Criteria Evaluated	Other Existing Facilities	Temporary Buildings	Construct New Facility	Replace Existing Press	No Action Alternative
Future workload capability	No	No	Yes	No	No
Consolidation of old buildings	No	No	Yes	No	No
Equipment replacement	No	No	Yes	Yes	No
Safety Improvements	No	No	Yes	No	No
Quality	No	No	Yes	No	No
Productivity	No	No	Yes	No	No
Reduce energy use	No	No	Yes	No	No
Maintenance cost reduction	No	No	Yes	No	No

2.3 Need for the Proposed Action

The purpose for constructing a new HE Pressing Facility is to support the production schedule commitment by the NNSA for stockpile stewardship into the future. Through the consolidation of operations now existing at Pantex Plant and equipment replacement, NNSA would meet the needs of changing weapon complexity, projected workload, and the current stockpile surveillance

and management, and to incorporate a more robust infrastructure while improving safety, quality, and productivity. Additionally, the NNSA would reduce energy use and the cost of maintaining operations by consolidating existing operations at Pantex Plant from several facilities into one. Placing the proposed facility adjacent to an industrial zone would locate this operation in a separate zone from weapons assembly facilities.

2.4 Scope of the EA

HE operations were part of the preferred alternative analyzed in the *Final Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components*, DOE/EIS-0225, also known as the *Site-Wide Environmental Impact Statement* (SWEIS) for Pantex Plant. A Record of Decision (ROD) based on this EIS, was published in January 1997. HE operations have not changed since the January 1997 ROD.

This EA for the proposed High Explosive Pressing Facility, therefore, does not discuss the need for HE operations, but focuses instead on the activities and impacts of construction and operation of a new HE Pressing facility.

A sliding-scale approach was used for analyzing potential environmental and socio-economic effects and determined that certain aspects of the preferred alternative have a greater potential for creating environmental impacts than others. The aspects with greater potential for impacts are discussed in more detail in this EA.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Regional Setting

The Pantex Plant is centered on approximately 15,977 acres in Carson County of the Texas Panhandle, north of U. S. Highway 60 and 17 miles northeast of downtown Amarillo. The Plant consists of land that is owned and leased by the DOE/NNSA. A safety and security buffer zone south of the main Plant consists of 5,800 acres that are leased from Texas Tech University (TTU). Pantex Plant is on the Llano Estacado (staked plains) portion of the Great Plains, at an elevation of approximately 3,500 feet. Plant topography is relatively flat, characterized by rolling grassy plains and numerous natural playa basins. The region is a semi-arid farming and ranching area. Pantex Plant is surrounded by agricultural land, but several industrial facilities are also located nearby.

3.2 Site Specific Description and Analysis

3.2.1 Land Use

Affected Environment: The site for the proposed project is formerly cultivated upland that is restored short grass prairie with buffalograss (*Buchloe dactyloides*) and blue grama (*Bouteloua dacilis*) as the dominant plant species. The area is mowed approximately once every 3 years to help reduce fuel loading because grazing is not allowed in this protected area.

Shortgrass prairie, consisting of buffalograss, blue grama, and, in mesic sites, western wheatgrass (*Agrophyron smithii*), represents the primary habitat for species of concern in the area, such as

Texas Horned Lizard (*Phrynosoma cornutum*), Ferruginous Hawk (*Buteo regalis*), Western Burrowing Owl (*Athene cunicularia hypugaea*), and song birds.

Trapping and spotlight surveys have been conducted on Pantex and TTU property to document the presence or absence of Swift Fox (*Vulpes velox*) and Plains Spotted Skunk (*Spilogate putorius interrupta*), rare species without regulatory status. Data suggests that these two species do not occur on these sites, and thus it is believed that they do not occur in the vicinity of the proposed project.

Colonies of Black-tailed Prairie Dog (*Cynomys ludovicianus*) provide habitat for some special status species such as Ferruginous Hawk, Bald Eagle (*Haliaeetus leucocephalus*), Golden Eagle (*Aquila chrysaetos*), Western Burrowing Owl, and some songbirds. Prairie dog colonies are found on the Plant, but not within the proposed project area.

The Texas Horned Lizard is the only State threatened or endangered species that is a year-round resident in areas of the Plant. It could be found at the proposed project site. The American and Arctic Peregrine falcons (*Valco peregrinus anatum* and *Falso peregrinus tundruis*), as well as the Bald Eagle and Whooping Crane (*Grus America*), are migratory, and may be observed along the project route during the fall through spring migrational and wintering periods. There is no designated Critical Habitat on the proposed project site or the Plant, nor is the habitat on the site considered unique compared to adjacent portions of the same grass stand.

Environmental Consequences of Preferred Alternative: Approximately 30 total acres of reestablished shortgrass prairie would be impacted by both permanent and temporary features of the proposed project. Of the total area impacted, approximately 4.7 acres would remain in industrial use after project completion if the construction access road were to later become permanent. The 25.3 acres of temporarily disturbed land would be reseeded with native grass between February and April, and would take approximately 2 years to establish. If project construction were completed in May or June, the native grass could still be planted, though that is not the ideal time for establishment. If construction is completed in the fall, wheat can be planted to prevent erosion and native grasses can be planted the following spring.

Excess soil, generated as a result of construction activities, would be handled in accordance with applicable rules and regulations. Depending on characterization, the excess soil may be sent to the onsite borrow pit for reuse, or to an applicable landfill as solid waste.

If nests of songbirds and/or game birds were discovered in the proposed construction area, the Pantex Wildlife Biologist would be contacted for assistance in mitigating disturbance of these nests. Nests could possibly be encountered during the March through August nesting season.

If Texas horned lizards were encountered at the proposed site, they would be moved out of harm's way and released adjacent to the site. Horned lizards could possibly be encountered from March/April through September/October. It is possible that the 25.3 acres of temporary disturbance left from construction would be of use to Texas horned lizards and other species that utilize bare, soft, or recently disturbed ground.

Impact to transient species would be minimal, since the habitat disturbance area would be geographically small scale, temporary, and not a critical or unique habitat.

Environmental Consequences of No Action: The proposed project site would remain as reestablished shortgrass prairie habitat, undisturbed except for mowing every 3 years.

3.2.2 Surface Waters

Affected Environment: The principal surface water feature on the Southern High Plains is the Canadian River, which flows southwest to northeast approximately 27 kilometers (17 miles) north of the Plant. Plant surface waters do not drain into this system, but mostly discharge into onsite playas. Storm water, from agricultural areas at the periphery of the Plant, drains into offsite playas. From the various playas, water either evaporates or infiltrates the soil.

Environmental Consequences of Preferred Alternative: Runoff with increased suspended solids could occur during the proposed site work, ultimately ending up in Playa 2. Erosion controls, such as down-slope silt fences and/or stabilization methods, e.g., mulch, stabilization blanket, etc., would be evaluated and implemented where needed to mitigate soil erosion and siltation during rain events. Impervious surface area would be increased after project completion by approximately 4.7 acres and could result in slight increases in the amount of runoff to Playa 2 from storm events. Due to the size of the project, requirements in Texas Pollution Discharge Elimination System (TPDES) Permit TXR150000 would apply. The permit requires that a Storm Water Pollution Prevention Plan for Construction Sites be developed; and it also has other requirements, such as a Notice of Intent and inspections. In addition, requirements from TPDES General Permit for Discharges from Concrete Production, Permit TXG110000, applies to the concrete batch plant. The berming could exclude Pantex from having to sample; however, all the other requirements would be met.

Environmental Consequences of No Action: The no action alternative would maintain the acreage now pervious to water, with no change in runoff to Playa 2 and no potential for temporary erosion and siltation during storm events.

3.2.3 Air Quality

Affected Environment: Modeling results, of concentrations for criteria and toxic pollutants using Plant emissions for ongoing operations, indicated that none of the National Ambient Air Quality Standards (NAAQS) would be exceeded at the Pantex boundary. All of the toxic air pollutants were estimated to be below their respective annual Effect Screening Levels (ESLs) at the Plant boundary. Modeling performed during 1996-2001 indicated that no NAAQS or annual ESLs were exceeded during that time. Similarly, concentrations at the Pantex Plant boundary are estimated to continue to remain within all NAAQS and annual ESLs, based on projected emissions for continued Plant operations. No new modeling for the operations in the proposed facility is necessary because the emissions are so low they are considered to be de-minimis (values that are below regulatory concern).

Environmental Consequences of Preferred Alternative: Air emissions would include dust (from trenching and movements of construction vehicles), emissions from vehicle exhausts, and dust and emissions from operation of the concrete batch plant; but these emissions would not require monitoring. Such standard dust suppression methods as water spraying would be used to minimize dust from excavation or construction. Appropriate best management practices would be used to control fugitive dust and particulate emissions. No regulated air pollutants would be used in construction of the HE pressing facility, so no NAAQS or ESLs would be affected.

Operations at the proposed new facility would not introduce any new processes to the Plant, so additional modeling of concentrations for criteria and toxic pollutants using Plant emissions for ongoing operations would be unnecessary. The permit limits presented in Table 2 would not be exceeded. It is conceivable that operation of the more modern equipment used in the proposed new facility would result in a slight reduction of emissions, but that premise cannot be quantified.

Table 2. Emissions Estimates and Permit Limits

Air Quality	
Construction emissions	Estimated to be less than 3 metric tons per year of PM10 in peak construction year
Stationary source operation emissions, metric tons/year	*CO – 4.72 NO*x* – 22.88 TSP – 10.24 SO2 – 0.34 Lead – 0.0 VOC – 1.32 HAP – 3.44

* The numbers in the above chart give the construction emissions estimates and the permit limits for Permit 282334, Clean Air Act - Title V, Documentation of Synthetic Minor Source.

Environmental Consequences of No Action: Air quality would not be impacted because there would be no short-term emissions from construction activities.

3.2.4 Cultural Resources

Affected Environment: A major thrust of the Pantex Cultural Resources Program is systematic survey coverage of all areas surrounding the 4 playas on DOE-owned and TTU land, plus a substantial sample of non-playa areas. Based on these surveys, a prehistoric archeological site location model was developed and confirmed. This site location model holds that prehistoric archeological sites at Pantex (probably also throughout the Llano Estacado) would be within approximately 1/4 mile of playas or their major drainages. Conversely, such sites would not occur in the interplaya upland areas. This site location model was included in formal consultation with the Texas State Historic Preservation Office (SHPO), and is included in the *2004 Pantex Plant Cultural Resource Management Plan*. Features related to more permanent occupation (hearths, tipi rings, fire-cracked rock concentrations, architectural evidence, or human burials) have not been found at any Plant sites, either as surface or subsurface expressions. Since at least the early 1900s, such historic agricultural activities as plowing and grazing have extensively and aggressively modified virtually all of the Llano Estacado. Consequently, most surface or shallow prehistoric archeological sites are seriously disturbed, lacking the original spatial relationships of their artifacts and features. The Pantex Site Office and the SHPO have agreed that the disturbed sites lack the integrity required for consideration of inclusion in the National Register.

Environmental Consequences of Preferred Alternative: No construction would be performed within 1/4 mile of a playa lake; therefore, no impacts to cultural, archeological, or historic resources are expected, based on the site location model discussed under Affected Environment. Discovery of buried material or cultural remains during construction would not be expected, since the proposed construction site was formerly disturbed by cultivation, but if artifacts were encountered, activities would cease until the significance of the remains was determined and appropriate subsequent actions were taken.

Environmental Consequences of No Action: This alternative would have no potential to impact cultural resources or properties.

3.2.5 Visual Resources

Affected Environment: The topography of the project area is relatively flat. The office and production buildings at Pantex are visible to some of the landowners, and to traffic along Highway 60 and Farm-to-Market (FM) Roads 2373, 683, and 293. As for the proposed site, it is covered in reclaimed shortgrass prairie that provides habitat for wildlife and is visible to Pantex workers as undeveloped area.

Environmental Consequences of Preferred Alternative: Heavy equipment and hauling operations, staging areas, site preparation activities, trenching, construction, and operation of the concrete batch plant, and construction traffic would denude approximately 30 acres of revegetated prairie and create temporary adverse visual effects. However, upon completion of the proposed project, removal of equipment and reestablishment of vegetation in the areas affected by construction would restore the pre-project visual qualities of all but approximately 4.7 acres of the proposed project area. The proposed new facility would be adjacent to an industrial zone within the security fence of the Limited Area, and from a distance would present a façade similar in size and appearance to existing facilities. For the public traveling on area roads, there would be a slight change in the distant viewscape.

Environmental Consequences of No Action: There would be no temporary adverse visual effects caused by the presence of heavy equipment or the temporary denuding of 25.3 acres of reestablished shortgrass prairie by new construction, no permanent change in 4.7 acres of shortgrass prairie to industrialization, and no slight change in the viewscape for the public traveling on area roads.

3.2.6 Noise

Affected Environment: Offsite sources of environmental noise include background sounds from vehicular traffic on Highway 60 and FM roads, county roads, airport traffic, railroad traffic on a major east-west corridor with two tracks, and the operation of heavy equipment during agricultural activities.

Sources of environmental noise at Pantex include background sounds from industrial processes, vehicular traffic, routine operations, occasional high-explosives testing, security police officer firearms training, and ongoing infrastructure construction and demolition. Average onsite sound levels are 40-60 decibels A-weighted (dBA).

Environmental Consequences of Preferred Alternative: The temporary increase in noise levels from proposed construction activities and traffic would be similar to other construction activities and vehicular noise at Pantex, as well as offsite vehicular traffic, airport traffic, railroad traffic, and agricultural activities. Temporary increases would not be expected to cause sufficient change in noise levels to result in more than a temporary annoyance to Plant employees or adjacent landowners. Temporary, intermittent noise levels (between 73 and 90 dBA) could result from the use of heavy equipment like backhoes and front-end loaders during clearing and excavation activities. These levels attenuate rapidly with distance, and will not likely impact neighboring landowners because construction activities would be confined to the central portion of the Plant,

away from residential populations. Noise levels would return to pre-construction levels following completion of proposed construction activities.

Environmental Consequences of No Action: Under the No Action alternative, current ambient noise levels would be maintained within the Plant and in the surrounding vicinity.

3.2.7 Transportation/Traffic

Affected Environment: Regional and site transportation routes are the primary methods used to transport Pantex-affiliated employees, hazardous materials, and radioactive materials. Interzonal transfers are carried out on paved roads. Transportation between buildings in various zones is frequently carried out via enclosed ramps. Track roads are sometimes used for production and monitoring well access and utility access. Onsite transfer of radioactive material is governed by DOE orders and Pantex-specific standards.

Offsite, Highway 60 and FMs 683, 2373, and 293 are paved roads that are most heavily used within the project area. There are also unpaved county roads offsite that are less heavily used.

Environmental Consequences of Preferred Alternative: There would be some temporary increase in traffic from proposed construction, and there might also be rerouting of onsite traffic. No offsite routes would have traffic flow interrupted directly by construction, because the proposed construction would occur within the industrialized area of Pantex, away from Plant boundaries. Construction activities would not be expected to cause sufficient change in traffic to result in more than a temporary annoyance to Plant employees or adjacent landowners. Upon completion and start up of the proposed facility, there could be a slight reduction in Plant traffic, and an accompanying reduction in fuel use and vehicle maintenance costs, by consolidating existing operations from several facilities in various zones into a single facility.

Environmental Consequences of No Action: Current traffic patterns would continue within the Plant, and there would be no temporary increase in traffic offsite from the proposed construction of the HE Pressing Facility. The opportunity to reduce fuel use and vehicle maintenance costs by consolidating HE pressing activities would be lost.

3.2.8 Waste

Affected Environment: Types of waste generated by construction activities could include universal wastes such as batteries, pesticides, paint and paint-related waste, and fluorescent lamps; sanitary wastes, such as general office trash; non-hazardous wastes such as inert and insoluble materials (bricks, concrete, glass, dirt, certain plastics and rubber items not readily degradable, certain liquids); and hazardous wastes, such as solvents. Additional waste types could be characterized during the proposed construction. All waste material would be evaluated by the Waste Operations Department of B&W Pantex for recycle, reuse, or resale value. All construction material and office material should, if possible, adhere to the Environmental Protection Agency (EPA) Comprehensive Procurement Guidelines listed on the EPA Website. (EPA Comprehensive Procurement Guidelines at www.EPA.gov/cpg/products.htm)

Environmental Consequences of Preferred Alternative: The proposed construction would result in a potential for the generation, treatment, storage, and disposal of solid waste as defined in 40 CFR 261.2. Waste would be handled in a manner that is appropriate to its characterization and is

consistent with federal and state regulations and the contractor's approved waste management plan. Waste minimization principles would be incorporated into the project. Residual wastes would be evaluated for possible reduction of volume, toxicity, and mobility.

Operational impacts would not change from current waste management practices. The same types of waste would be generated by the proposed new facility as that generated by existing HE facilities, since the processes would be the same. Current waste generation numbers are not available for specific HE pressing operations. Volume and/or weights of waste generated from the various facilities are available but the waste cannot be separated out for a single process. To maintain cost efficiencies, the support material from a pressing operation is accumulated and tracked with similar waste from other processes within these locations. For safety requirements, HE scrap from other processes may also be commingled, accumulated, and tracked together. The FY07 waste generated from all HE operations in the current facilities is listed below in Table 3. It is conceivable that reductions in maintenance at the proposed new facility would result in a slight reduction of generated waste, but that premise can only be quantified through time.

Table 3. FY07 Waste Generation from Existing HE Operations

		Solid					**Liquid**			
Bldg.		**HZ**	**Non-HZ**	**LL**	**MW**		**HZ**	**Non-HZ**	**LL**	**MW**
#1	(lbs.)	0	211	0	0		0	0	0	0
	(gal.)	0	110	0	0		0	0	0	0
#2	(lbs.)	238	2008	0	0		0	15992	0	0
	(gal.)	140	770	0	0		0	1925	0	0
#3	(lbs.)	3554	3881	0	0		0	1732	0	0
	(gal.)	2440	1430	0	0		0	220	0	0

Environmental Consequences of No Action: There would be no generation of additional solid waste from construction of the HE Pressing facility.

3.2.9 Utilities and Infrastructure

Affected Environment: The existing underground utilities that consist of electric, sewer, and High Pressure Fire Loop (HPFL) would require minimal trenching for extensions to the facility. The trenching for basic utilities would be from the perimeter road of the adjacent industrial zone to the proposed facility. All underground utility lines such as fire protection water lines, new water lines, sanitary sewer lines, and electric lines would not be placed under pavement, except when crossing such pavement is unavoidable or when adequate space is not available. All above ground utilities that cross roadways would have a minimum vertical and horizontal clearance of 16 feet.

The following underground utilities would be extended to the proposed new facility:

- Potable water
- HPFL

- Electricity
- Sewer
- Telephone
- Local Area Network(s), and
- Public address system

Environmental Consequences of Preferred Alternative: The project manager would coordinate the underground piping requirements with the cathodic protection coordinator to be sure that the piping is properly protected.

Connection to the potable water system would comply with the requirements and specifications outlined in the National Sanitation Foundation/American Water Works Association manuals. Any materials used would be approved for use in a potable water system. Any connections (and/or disconnections) with the sanitary sewer system and/or potable water system would be approved by the Utilities System Engineer. A final inspection and approval would be provided by the water system purveyor before operations begin.

The SWEIS evaluated alternatives related to continued operations of Pantex Plant. Utility usage was evaluated for water, wastewater treatment, steam, electricity, and natural gas. The *Supplement Analysis for the Final Environmental Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components* (SA), DOE/EIS-0225/SA-03, stated that utility usage during 2002-2006 would remain within the range evaluated in the SWEIS and within the capacities of the current utility system. Usage by the proposed new facility should not exceed the ranges of utility usage evaluated in the SA, since the activities occurring in the new facilities would be a consolidation of current activities and no new activities would be introduced. However, new and improved energy-saving equipment, devices, and procedures would be in place at the proposed new facility and could result in reductions in energy use during HE Pressing activities. Exact numbers quantifying current utility usage from the various buildings involved in the existing HE pressing operations is not available due to lack of meters on individual buildings at Pantex.

The utility usage for the proposed HE Pressing Facility during construction and operations were calculated and results are in Table 4 below. The calculations were bounded for the worst case or maximum possible demand. Water usage would be higher during the concrete work associated with the project and would be reduced after that phase.

Table 4. Utility Usage During Construction and Operations

Utility Usage	Electrical: Maximum estimated electrical power consumption per day	Water
Construction	2170.5 kilowatts per hour.	540,000 gallons (for entire project)
Operations	1,936 kilowatts per hour.	57 gallons per minute (maximum demand)

For the HE Pressing Facility, the use of comparison modeling and life cycle costing shows a cost versus energy efficiency comparison between the base design and two alternatives. Comparison

between the base design, first design alternate, and second design alternate confirms the decision to use the second alternate. The life cycle costing calculates that the building with the higher first cost (second alternative) also would have the lowest annual operating cost.

- The first alternate design would cost $12,500 more than the base, and would generate $7,447 in annual savings. This would have a 1.67-year simple payback.

- The second alternate design would cost $54,500 more than the first alternate would, and would generate $6,755 in annual savings. This would have a 7.99-year simple payback.

  The second alternate would also have the lowest BTU/ square foot at 202,272 BTU/square foot. This is 10% below the FY03 Pantex baseline and 4% below the FY07 baseline.

The efficiency of this process building would contribute to the stringent energy reduction requirements in the new DOE Order 430.2B.

Environmental Consequences of No Action: Utility trenching and hookups would not be needed, and there would be no potential for energy savings through consolidation of HE activities in one place with the latest energy saving equipment, devices, and procedures in use.

Those aspects of the preferred alternative judged to have little potential for impact are the following:

Socioeconomic Resources: The majority of construction materials and temporary construction workers would most likely be drawn from the local community. As a result, permanent increases in population would not occur, and housing and community services would not be permanently impacted. The increase in economic activity would be temporary and would subside with project completion.

Environmental Justice: There are no low income or minority populations residing within a 5-mile radius of the Plant. The 2000 Census indicates that 130 people were residing within that area. In that same census, Carson County, where Pantex Plant is located, showed that 9.4 percent of residents were minorities. The majority of construction activities would be confined to the central portion of the Plant, away from residential populations.

Human Health: Pantex workers and subcontractors involved in potentially hazardous operations are protected by administrative and engineering controls, and required to wear appropriate personal protective equipment. Workers receive training that is required to identify and avoid or correct potential hazards typically found in the work environment, and to respond to emergency situations. Pantex subcontractors must submit a Health and Safety Plan that follows Plant guidelines, and work must be performed according to this plan.

Wetlands/Floodplains: The proposed project site is not within the 100-year floodplain of the nearest playa lake, which is approximately 3,000 feet west. The project site can be categorized as upland, and does not support wetlands.

Geology: The primary surface deposits at Pantex are the Pullman and Randall soil series, which grade downward to the Blackwater Draw Formation. This formation consists of about 15 meters (50 feet) of interbedded silty clay with caliche, and very fine sand with caliche. Underlying the Blackwater Draw Formation, the Ogallala Formation consists of interbedded sand, silt, clay, and gravel. The base of the Ogallala Formation is an irregular surface that represents the pre-Ogallala topography. As a result, depths to the base of the Ogallala vary. At Pantex Plant, the vertical distance to the base of the Ogallala varies from 394 feet at the southwest corner to 889 feet at the northeast corner of the Plant. Underlying the Ogallala Formation is sedimentary rock of the Dockum Group, consisting of shale, clayey siltstone, and sandstone. Geotechnical sampling would occur at the proposed site as a standard practice for a free-standing structure to determine foundation strength and reduce the risk of structural failure. The only impacts would be small diameter boreholes, which would not affect the underlying formations.

Groundwater: Groundwater beneath the proposed site is first encountered approximately 265 feet deep, and is perched above a low permeability fine-grained zone. The Ogallala Aquifer is present beneath the proposed site about 410 feet deep. None of the construction surface work would result in contaminants reaching the perched groundwater or the Ogallala Aquifer. There would be zero discharge of untreated water to the perched groundwater or the Ogallala Aquifer during operations.

Prime Farmlands: Pantex Plant contains several soil types classified as prime farmland, which is defined in *Prime and Unique Farmlands* (7 CFR 657) as land containing the best combination of physical and chemical characteristics for producing crops. This includes cropland, pastureland, rangeland, and forestland, which covers the majority of Pantex Plant. The proposed project site has not been in cultivation since 1993 and is not expected to be cultivated in the future, since it is within the protected area of the Plant. No farmland in production would be impacted by the proposed project.

4.0 CUMULATIVE EFFECTS

Actions that could contribute to cumulative impacts include those conducted by Federal or non-Federal agencies or persons on lands adjacent to the Pantex Plant, within a 50-mile area of influence. Actions in the Area of Influence (AAI) include:

- Installation of wind turbines
- Construction of a gas pipeline
- Construction of a replacement facility for the office of secure transportation
- Construction of a wastewater conveyance pipeline
- Construction of an overpass at FM 2373 and Highway 60
- Demolition projects within the Plant.

Analyzed resources, which could receive cumulative effects, are air quality, land, noise, and waste.

4.1 Air Quality

AAI are intermittent and short term and, in a region with an average annual wind speed of 14 miles per hour, would not degrade the local air quality of the Plant. Throughout construction and

during subsequent operations at the proposed HE Pressing Facility, the Pantex Plant is expected to remain at or below allowable emissions limits and permit requirements. The incremental impact of the preferred alternative, when added to those from actions of a similar nature, would be minor.

4.2 Land Disturbance

AAI are temporary and short term. Most of the acreages that are needed for these construction projects would be returned to their original condition of open space or cultivation. For other construction projects, only the footprint of the facility would remain and the land not necessary for the footprint would be restored. The pipelines are underground, so after installation, the surfaces would be returned to the original condition. Regarding the demolition projects, the footprints would be removed and the site returned to open space. Therefore, the incremental impact of the preferred alternative, when added to impacts from actions of a similar nature, could result in minimal cumulative effects on land disturbance.

4.3 Noise

Sounds produced by construction equipment are attenuated by winds, distances, and by their temporary nature. The incremental impact of the preferred alternative, when added to those from actions of a similar nature, would be minor.

4.4 Construction Waste

No wastes are expected to remain at the proposed project site. All wastes would be handled appropriately in accordance with the approved waste management plans and applicable procedures. The waste would not require special handling beyond the capabilities of licensed disposal facilities. The projects making up the AAI will not all be constructed simultaneously, so the capacities of licensed disposal facilities should not be exceeded at any one time. The incremental impact of the preferred alternative, when added to those from actions of a similar nature, would be small.

Based on the preceding discussions for air quality, land disturbance, noise, and waste, the effects of the Preferred Alternative, when combined with those effects of others actions defined in the scope of this section, do not result in cumulatively major impacts.

5.0 ACCIDENT ANALYSIS

The preferred alternative consists of activities that are performed on a routine basis in construction. Therefore, specialized accident types that are considered at NNSA facilities are not a consideration. The most serious potential accident considered for the Preferred Alternative would be a fatality, although none are likely to result from the proposed construction. Potentially serious exposures to various hazards or injuries are possible during the construction phase of the Preferred Alternative. Adverse effects could range from relatively minor (e.g., lung irritation, cuts, or sprains) to major (e.g., lung damage, broken bones, or fatalities).

The *National Census of Fatal Occupational Injuries in 2006* from the U.S. Department of Labor - Bureau of Labor Statistics, found that construction activities accounted for 1,226 fatal work injuries, the most of any industry sector. The Occupational Injuries and Illnesses and Fatal

Injuries Profile, also from the Bureau of Labor Statistics, includes the following data as causes of fatalities in the construction industry: contact with objects and equipment, falls, exposure to harmful substances or environments, transportation incidents, fires and explosions, assaults and violent acts. Potential worst case industrial accident scenarios from the construction of the proposed HE Pressing Facility could include: excavation collapse, wall collapse, crane collapse, chemical exposure, contact with an electrical current, or grassfire from a welding spark.

B&W Pantex has stringent safety requirements for all employees and contractors and the safety statistics are lower than national averages – in 2007, the total recordable case rate was .60. The potential for any accidents related to the construction of the proposed facility would be anticipated to be no worse than the current safety statistics at Pantex.

Contractors building the HE Pressing Facility would be required to comply with requirements in the Division I Specifications, including the safety requirements. Applicable health and safety training would be required for any contractor involved in the construction of the new facility. Appropriate personal protection programs would be a routine part of the construction activities and would involve the use of such personal protection equipment as gloves, hard hats, hard-toed boots, eye protection, and hearing protection.

The SWEIS analyzed two accident scenarios that involved HE detonation – one initiated from an internal process involving HE development, manufacturing, testing, evaluation, and treatment, and one initiated from an external event or natural phenomena. Both types of potential accidents were analyzed in the *High Explosive Pressing Facility Developmental Process Hazard Analysis* (PHA) for the proposed HE Pressing Facility. The SWEIS concluded that the likelihood of the internal event could occur at a frequency greater than or equal to 10^{-2} per year (*anticipated)*. The scenario involving an external event or natural phenomena would be *unlikely* – or potentially occurring less than 10^{-2} per year but greater than or equal to 10^{-4} per year. Either scenario could fatally injure a worker; however, members of the public and non-involved workers would not be at risk.

The PHA was performed for the construction of a proposed new High Explosive Pressing Facility that would house processes now operating in existing facilities at Pantex. The HE process equipment would be located in various areas of the new facility. These areas would contain equipment that processes explosives in inspection, heating, pressing, staging, machining, and radiography operations, already being performed at Pantex. The PHA qualitatively evaluated both facility and high-level process hazards. Also evaluated was the interaction of the identified hazards and potential external and natural phenomena events. The result of a PHA is a set of controls, both preventive and mitigative, that can be relied upon to prevent or minimize the event consequences. Upon completion of construction, this document would be revised to reflect the "as built" modifications and to evaluate the HE Pressing Facility Process procedures written for specific operations performed in each area.

The facility design, location, construction, and established material limits would meet the requirements of TM 5-1300, DOE/TIC-11268, and DOD 6055.9-STD to resist the impacts of an explosion from a nearby facility and would also takes into account protecting nearby facilities. The Explosives Safety Program establishes the quantity distance and correct location distances for facilities. The location criteria, in conjunction with the Nuclear Materials and Explosives Inventory Control Program bay limits, ensure an explosion that occurs in one building would not result in a sympathetic explosion in a nearby building.

The HE Pressing Facility would consist of bays with blast doors, which would comply with DOE Explosives Safety Manual, that provide protection from blast overpressure and fragments. The HE Pressing Facility would include individual control areas for remote operation bays. The bay walls would be designed in accordance with TM5-1300, *Structures to Resist the Effects of Accidental Explosions*. The proposed HE Pressing Facility Bay structures would be designed to mitigate the effects of an explosive accident in an adjoining bay, prevent penetration of primary missiles from the bay of explosive occurrence into adjoining bays, vent the blast pressures associated with internal explosions, and provide protection for personnel in occupied areas outside the bay of occurrence.

The bay structures would also be designed to mitigate the effects of design basis Natural Phenomena Hazard (NPH) events, as classified by DOE-STD-1021-93, *Natural Phenomena Hazards Performance Categorization Guidelines for Structures, Systems, and Components*. The proposed HE Pressing Facility would be constructed to withstand a PC-2 seismic event and PC-2 wind and PC-3 tornado loads. The construction of the building would also withstand mechanical impact due to an impact by a surface vehicle. The construction of the HE Pressing Facility must have a roof design that would not fail up to the load requirements of PC-2 snow/ice/rain/hail accumulation.

Upon completion of construction, hazard analysts would identify as-built facility hazards using a comprehensive checklist specifically developed by the Authorization Basis Department of B&W Pantex to aid in hazard identification walkdowns. The checklist would exhaustively address the wide range of hazards found throughout the Plant; therefore, using the checklist ensures all facility hazards would be identified. Using the hazards checklist, knowledgeable hazard analysts and building personnel would perform physical walkdowns of the facilities and document the hazards present. Reviewing existing documentation about a specific facility would provide information about hazards that would not be easily identified during physical walkdowns.

A draft *Title II Fire Hazards Analysis* (FHA) was prepared to ensure that adequate fire protection and life safety features are incorporated into the design of the proposed new HE Pressing Facility. The FHA provides a comprehensive evaluation of the risks from fire and its related perils in this facility. This document identifies major fire protection and life safety features required for this facility and the necessary codes and standards to correctly design and install those features. In addition, this document identifies key occupancy and hazard classifications. It also identifies key design criteria (i.e., sprinkler system densities/remote area and hose streams, etc.).
The potential for catastrophic accidents would be reduced due to safety features built into the design of the proposed new facility.

6.0 INTENTIONAL DESTRUCTIVE ACTS

A fundamental principal of DOE's safeguards and security program is a graded approach to the protection of its employees and assets. This approach is embodied in the relevant threat considerations and designations of facilities. DOE intends that the highest level of protection be given to security interests where loss, theft, compromise, or unauthorized use would adversely affect national security, the health and safety of employees and the public, or the environment.

This graded approach places all DOE assets into one of four "Threat Levels" based on the general consequences of loss, destruction, or impact to public health and safety of the asset, which can be a facility, program, project, or activity. Pursuant to DOE's Design Basis Threat Policy (DOE

Order 470.3A), the proposed facility is designated a Threat Level 4 (TL4) facility. This is the level assigned to a facility that has the lowest risk based on the general consequence of loss destruction or impact to security, public health and safety. In assigning the TL4 designation, DOE has evaluated the security, health and safety impact of the facility and has determined the impact to be low.

Scenarios for intentional destructive acts at the proposed new facility (e.g. terrorism, internal sabotage) have been evaluated and determined to have a low potential to impact security, public health and safety. The impact of an intentional destructive act would have no greater environmental, public health or safety consequence than the worst-case industrial accident scenario hazard discussed above – the detonation of HE.

7.0 SUMMARY OF IMPACTS

The following is a summary of impacts from the proposed new facility, along with comparison of impacts from new facilities presented in the SWEIS:

- Land Use – The SWEIS accounted for impacts from approximately 171,000 square feet of new construction in six facilities. Only one of the six facilities has been built, accounting for about 29,000 square feet of new construction. The proposed HE Pressing Facility would be approximately 45,000 square feet, well within the bounds of new construction analyzed in the SWEIS.

- Surface Water - Process water would be subject to the same stringent wastewater discharge requirements as water from current operations, and will adhere to the limits regulated by current permits. Impacts on surface water in the SWEIS remained within regulated limits.

- Air Quality – Emissions during operations would remain within limits regulated by existing permits, as shown in Table 2. Air emissions in the SWEIS were within regulated limits.

- Cultural Resources – Operations would not impact cultural resources.

- Visual Resources – From a distance, the completed facility would present a façade of similar size and appearance as existing facilities. Visual resources were not analyzed in the SWEIS

- Noise – Average sound levels onsite would be in the range of 40-60 decibels A-weighted (dBA) during use of the proposed facility, the same average sound levels determined to be present onsite in the SWEIS analyses.

- Transportation/Traffic - Upon completion and start up of the proposed facility, there could be a slight reduction in Plant traffic, and an accompanying reduction in fuel use and vehicle maintenance costs, by consolidating existing operations from several facilities in various zones into a single facility. This would be an improvement over plant traffic usage and patterns presented in the SWEIS, which dealt with unconsolidated HE activities.

- Waste – Consolidation of existing operations, without the introduction of new operations, would not result in major increases in waste. Operational impacts would not change from

current waste management practices, the same conclusion reached in the SWEIS for the several proposed new facilities analyzed at that time.

- Utilities and Infrastructure - New and improved energy-saving equipment, devices, and procedures in place at the proposed new facility would be expected to contribute to fulfilling the stringent energy reduction requirements in the new DOE Order 430.2B, resulting in an overall reduction in utility usage as presented in the SWEIS.

- Cumulative Effects – No major cumulative effects are expected.

- Accidents - The potential for catastrophic accidents during operations is expected to be reduced from that analyzed in the SWEIS because of safety features built into the design of the proposed new facility that were not found in the older buildings used at the time of the SWEIS analyses.

- Intentional Destructive Acts - The impact of an intentional destructive act would have no greater environmental, public health or safety consequence than the worst-case industrial accident scenario. Intentional Destructive Acts were not analyzed in the SWEIS.

8.0 AGENCIES AND PERSONS CONSULTED

Cultural/historic: none

NNSA has a programmatic agreement with the Texas State Historic Preservation Office and an accepted *2004 Pantex Plant Cultural Resource Management Plan; therefore,* project-to-project consultation is not necessary.

Based on personal contact in the past and a Native American Treaty search in 1996, no Native American tribes have an interest in the area of the Pantex Plant.

Special status/wildlife and plants: none

The site biologist has coordinated and received concurrence from the Texas Parks & Wildlife Department and the U.S. Fish & Wildlife Service (FWS) with specific environmental practices and management plans followed at Pantex Plant. The FWS concurred with a 1996 Biological Assessment on Threatened and Endangered Species for the Pantex Plant.

The Pantex Site Office contacted the Texas Commission on Environmental Quality, Region I, by telephone on April 15, 2008, and informed of them of the proposed project. The Commission stated it had no concerns regarding the proposed action. A predecisional EA was provided to TCEQ for review and comment. The Commission did not comment on the proposed action.

If finalized and approved, the EA and FONSI can be found at the following website:
http://www.pantex.com/about/environment/regComp/NEPA/index.htm

9.0 REFERENCES

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U. S. Department of Energy
National Nuclear Security Administration
Pantex Site Office
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Amarillo, TX 79120-0030

FINDING OF NO SIGNIFICANT IMPACT
HIGH EXPLOSIVE PRESSING FACILITY

AGENCY: U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: NNSA has prepared an Environmental Assessment (EA), DOE/EA-1613, to analyze the potential environmental consequences of a construction project at the Pantex Plant in Amarillo, Texas. The proposed action is to construct a new facility that would consolidate the Pantex Plant's current high explosive (HE) pressing activities at one facility. The approximately 30-acre area proposed for construction would be impacted by a soil stockpiling area, an area for the entering and exiting of construction vehicles, an area for additional construction equipment, a laydown area, a permanent access road, a construction fence, a temporary concrete batch plant, and the proposed Pressing Facility.

Based on the information and analyses in the EA, NNSA has determined that the proposed action is not a major federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act (NEPA) of 1969, 42 United States Code 4321 *et seq.* Therefore, preparation of an Environmental Impact Statement is not required, and NNSA is issuing this FONSI.

COPIES OF THE EA ARE AVAILABLE FROM:

Ms. Brenda Finley, Public Affairs Officer
U.S. Department of Energy/National Nuclear Security Administration
P. O. Box 30030, Amarillo, Texas 79120.
(806) 477-3120, fax (806) 477-3185 or by e-mail to: BFinley@Pantex.doe.gov.

FOR FURTHER INFORMATION ON THE DOE NEPA PROCESS, CONTACT:

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EC:FY08:148;48228

FINDING OF NO SIGNIFICANT IMPACT
HIGH EXPLOSIVE PRESSING FACILITY

BACKGROUND: One of the missions of the Pantex Plant is to fabricate high explosive components for nuclear weapons. Other missions include reducing energy requirements, minimizing wastes, reducing environmental impacts, and increasing domestic energy supplies through productivity and operational enhancements.

The purpose for constructing a new Pressing Facility is to support NNSA's production schedule for stockpile stewardship. Through consolidation of existing operations at the plant and equipment replacement, NNSA has the opportunity to meet the needs of changing weapon complexity, projected workload, and the current stockpile surveillance and management, and to incorporate a more robust infrastructure while improving safety, quality, and productivity. Additionally, NNSA would reduce energy use and costs of maintaining operations by consolidating existing operations from several facilities into one. The proposed facility would be located adjacent to an industrial zone in a separate zone from the weapons assembly facilities.

DESCRIPTION OF THE PREFERRED ALTERNATIVE: The preferred alternative is to construct a new 45,000 square foot facility that would consolidate current HE pressing activities at one facility. This proposed pressing complex would combine HE inspection, machining, staging, pressing, and HE radiography.

The construction of the proposed facility would include administrative areas, non-explosive areas, main pressing bays and control areas, ovens/buildup bays, staging and inspection bays, mechanical/electrical support areas, magazine staging areas, and an all-weather ramp and receiving area.

The approximately 30-acre area needed for construction would be used for a soil stockpiling area, an area for the entering and exiting of construction vehicles, an area for additional construction equipment, a laydown area, a permanent access road, a temporary construction fence, a temporary concrete batch plant, and the proposed pressing facility.

The temporary concrete batch plant would be placed within the construction zone to supply concrete for the proposed facility. The batch plant would be constructed mostly of steel and a structural steel framework, and is anticipated to produce less than 300 cubic yards of concrete per hour.

ENVIRONMENTAL CONSEQUENCES: A sliding-scale approach was used for analyzing potential environmental and socioeconomic effects and determined that certain elements of the affected environment might be impacted more than others by the preferred alternative. These potential impacts were:

Land Use: Approximately 30 total acres of reestablished shortgrass prairie would be impacted by both permanent and temporary features of the proposed project. Of the total area impacted,

approximately 4.7 acres would remain in industrial use after project completion if the construction access road were to later become permanent. The 25.3 acres of temporarily disturbed land would be reseeded with native grass. It is possible for nests of songbirds and game birds to be discovered in the proposed construction area. If Texas horned lizards were encountered at the proposed site, they would be moved out of harm's way and released near the site. Horned lizards could possibly be encountered from March through October. It is possible that the 25.3 acres of temporary disturbance left from construction would be of use to Texas horned lizards and other species that utilize bare, soft, or recently disturbed ground. Impact to transient species would be minimal, since the habitat disturbance area would be geographically small scale, temporary, and not a critical or unique habitat.

Surface Water: Process water would be subject to the same wastewater discharge requirements as water from current operations and would need to adhere to the limits imposed by current permits, since the processes occurring in the new facilities would be a consolidation of current processes and no new processes would be introduced. Runoff with increased suspended solids could occur during the proposed construction, ultimately ending up in Playa 2. Erosion controls, such as downslope silt fences or stabilization methods (e.g., mulch, stabilization blanket, etc.) would be evaluated and implemented where needed to mitigate soil erosion and siltation during rain events. Impervious surface area would be increased after project completion by approximately 4.7 acres and could result in slight increases in the amount of runoff to Playa 2 from storm events.

Air Quality: Air emissions during construction would include dust (from trenching and movements of construction vehicles), emissions from vehicle exhausts, and dust and emissions from operation of the concrete batch plant. These emissions would not require monitoring. Standard dust suppression methods such as water spraying would be used to minimize dust from excavation or construction. Appropriate best management practices would be used to control fugitive dust and particulate emissions. No regulated air pollutants would be emitted during construction of the HE Pressing Facility, so no National Ambient Air Quality Standards or Effect Screening Levels would be affected. Emissions during operations would remain within limits imposed by existing permits, since the activities occurring in the new facilities would be a consolidation of current activities; no new activities would be introduced.

Cultural Resources: No construction would be performed within 1/4 mile of a playa lake; therefore, no impacts to cultural, archeological, or historic resources are expected, based on the site location. Discovery of buried material or cultural remains during construction is not expected, since the proposed construction site was formerly disturbed by cultivation, but if artifacts were encountered, activities would cease until the significance of the remains was determined and appropriate subsequent actions were taken.

Visual Resources: Heavy equipment and hauling operations, staging areas, site preparation activities, trenching, construction and operation of the concrete batch plant, and construction

traffic would denude approximately 30 acres of revegetated prairie and create temporary adverse visual effects. However, upon completion of the proposed project, removal of equipment and reestablishment of vegetation in the areas affected by construction would restore the preconstruction visual qualities of all but approximately 4.7 acres of the proposed facility area. The proposed facility would be adjacent to an industrial zone and, from a distance, would present a façade similar in size and appearance to existing facilities. For the public traveling on nearby roads, there would be minor changes to the distant viewscape.

Noise: The temporary increase in noise levels from proposed construction activities and traffic would be similar to other construction activities and vehicular noise at Pantex, as well as offsite vehicular traffic, airport traffic, railroad traffic, and agricultural activities. Temporary increases would not be expected to cause sufficient change in noise levels to result in more than a temporary annoyance to plant employees or adjacent landowners. Raised noise levels (between 73 and 90 dBA) from the use of heavy equipment like backhoes and front-end loaders during clearing and excavation activities would be temporary and intermittent. These levels would attenuate rapidly with distance and would not likely impact neighboring landowners because construction activities would be confined to the central portion of the plant, away from residential populations. Noise levels would return to preconstruction levels following completion of construction.

Transportation/Traffic: There would be some temporary increase in traffic from proposed construction, and there might also be rerouting of onsite traffic. No offsite routes would have traffic flow interrupted directly by construction, because the proposed construction would occur within the industrialized area of Pantex, away from Plant boundaries. Construction activities would not be expected to cause sufficient change in traffic as to result in more than a temporary annoyance to plant employees or adjacent landowners. Upon completion and start up of the proposed facility, there could be a slight reduction in plant traffic, and an accompanying reduction in fuel use and vehicle maintenance costs, by consolidating existing operations from several facilities in various zones into a single facility.

Waste: The proposed construction would result in the generation, treatment, storage, and disposal of solid waste. Waste would be handled in a manner that is appropriate to its characterization and is consistent with federal and state regulations and the contractor's approved waste management plan. Waste minimization principles would be incorporated into the project. Residual wastes would be evaluated for possible reduction of volume, toxicity, and mobility.

Operational impacts would not change from current waste management practices. The same types of waste would be generated by the proposed new facility as that generated by existing HE facilities, since the processes would be the same. It is conceivable that reductions in maintenance at the proposed facility would result in a slight reduction of generated waste, but that expectation cannot be quantified at this time.

Utilities and Infrastructure: Usage at the proposed facility would not exceed the ranges of utility usage evaluated in the SA, since the activities occurring in the new facilities would be a consolidation of current activities, and no new activities would be introduced. However, new and improved energy-saving equipment, devices, and procedures would be installed at the new facility and could result in reductions in energy use during pressing activities. Construction activities would require electricity and water only.

Cumulative Effects: Based on the preceding discussions, the potential effects of the Preferred Alternative, when combined with the effects of other actions within the area of influence, would not result in cumulatively significant impacts.

ALTERNATIVES CONSIDERED: In addition to the preferred alternative, NNSA considered the No Action Alternative, in which no new facility would be constructed and HE pressing activities would be adversely affected by increasing shutdowns for maintenance of the aging infrastructure. NNSA also reviewed the possibility of using other existing facilities, using temporary buildings, and replacing the existing press. NNSA found that retrofitting existing buildings would be an excessive construction investment. Temporary buildings would not meet safety and productivity requirements, and would require higher maintenance, likely forcing operations to shutdown during repairs. The replacement of the existing press could take up to several years, and pressing operations would be threatened. None of these alternatives were reasonable, and NNSA did not consider these further.

PUBLIC AVAILABILITY: The Pantex Site Office provided a copy of the Predecisional EA to the Texas Commission on Environmental Quality, Region I, for review and comment. The Commission did not comment on the proposed action. A Notice of Availability of the Final EA and FONSI will be published in the Amarillo Globe-News and the Panhandle Herald newspapers. Copies of the Final EA and FONSI will be available at the DOE Reading Rooms at the Lynn Library/Learning Center, Amarillo College, and at the Carson County Library in Panhandle, Texas. Copies can also be found on the following website: http://www.pantex.com/about/environment/regComp/NEPA/index.htm.

DETERMINATION: Based on the information and analyses in the EA, NNSA has determined that the proposed federal action, to construct a new facility that would consolidate Pantex's current high explosive pressing activities at one facility, does not constitute a major federal action that would significantly affect the quality of the human environment, within the meaning of the National Environmental Policy Act. Therefore, an Environmental Impact Statement is not required, and the NNSA is issuing this FONSI.

Signed in Amarillo, Texas this 11th day of June 2008.

Steven C. Erhart
Manager

EC:FY08:148;48228