

**FINAL**

DOE/EA-1997

**U.S. DEPARTMENT OF ENERGY**



**ENVIRONMENTAL ASSESSMENT FOR THE  
CONSTRUCTION LANDFILL EXPANSION**



**PANTEX PLANT \* AMARILLO, TEXAS \* January 2018**

**UNCLASSIFIED**

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## **ACRONYMS and ABBREVIATIONS**

AAI	Actions in the Area of Influence
CFR	Code of Federal Regulations
CNS	Consolidated Nuclear Security, LLC
D&D	Deactivation and Decommissioning
dBA	decibels A-weighted
DOE	Department of Energy
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
ESL	Effect Screening Levels
FM	Farm-to-Market Road
ft.	feet
GPS	Global Positioning System
m <sup>3</sup>	Cubic meters
MEF	Material Evaluation Form
M&O	Managing & Operating Contractor
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NNSA	National Nuclear Security Administration
NPO	NNSA Production Office
NTS	Not to Scale
OSHA	Occupational Safety and Health Administration
RCRA	Resource Conservation and Recovery Act
SA	Supplement Analysis
SHP	Southern High Plains
SHPO	State Historic Preservation Office
SWEIS	Site-Wide Environmental Impact Statement
SWMU	Solid Waste Management Unit
SWPPP	Storm Water Pollution Prevention Plan
TAC	Texas Administrative Code
TACB	Texas Air Control Board
TCEQ	Texas Commission on Environmental Quality
TNRCC	Texas Natural Resource Conservation Commission
TPDES	Texas Pollutant Discharge Elimination System
TSCA	Toxic Substances Control Act
TTU	Texas Tech University
TWC	Texas Water Commission
WOD	Waste Operations Department

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## **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) adheres to the Council on Environmental Quality regulations (*40 CFR 1500*) and DOE's NEPA-implementing procedures (*10 CFR 1021*). The purpose of an environmental assessment (EA) is to provide federal decision makers sufficient information and analysis to determine whether to prepare an environmental impact statement or issue a Finding of No Significant Impact.

## **2.0 PURPOSE AND NEED FOR AGENCY ACTION**

### **2.1 BACKGROUND**

Non-hazardous industrial waste at Pantex (See Figures 1 and 2) is managed in accordance with Title 30 of the Texas Administrative Code (TAC), Chapter 335 (*30 TAC 335*) and is divided into three classes:

- Class 1 wastes do not meet the definition of Resource Conservation and Recovery Act (RCRA) hazardous waste, but do exceed State-specified levels for hazardous contaminants or meet State-specific criteria for being ignitable or corrosive. Class 1 waste includes wastes subject to the *Toxic Substances Control Act* (TSCA) (*40 CFR 700-766*), such as asbestos and polychlorinated biphenyls with a concentration greater than 50 parts per million.
- Class 2 wastes are defined by the State of Texas as non-hazardous industrial wastes that are not Class 1 or Class 3 wastes. Pantex generates a category of waste designated as sanitary waste, which is described as office trash and cafeteria waste. Because such waste is produced incidental to the operation of an industrial facility (the Pantex Plant), it qualifies as a Class 2 non-hazardous industrial waste.
- Class 3 wastes are inert, essentially insoluble, and pose no threat to human health and/or the environment. Examples of Class 3 wastes include bricks, concrete, glass, dirt, and certain plastics and rubber items that are not readily degradable. Because of the difficulty in proving absolutely that a waste meets the Class 3 criteria, the Pantex Plant made the decision in 1996 to classify all potentially Class 3 waste as Class 2 waste.

Class 1 wastes are managed in a manner similar to hazardous waste and are shipped to offsite treatment and/or disposal facilities. Class 2 wastes that are liquids are shipped to commercial facilities for treatment and disposal; Class 2 wastes that are consistent with municipal solid waste (such as the sanitary waste) are disposed of at authorized offsite landfills.

Class 2 waste that is further characterized as construction debris (and might otherwise qualify as Class 3 waste) is the only category of non-hazardous industrial waste that is disposed of onsite (ASER, 2015); all other non-hazardous waste is recycled or disposed of offsite.

In December 1989, pursuant to the TAC, Title 31, Chapter 335.5<sup>1</sup> pertaining to Industrial Solid Waste Management, the Pantex Plant filed an Industrial Solid Waste Disposal Site Deed Recordation with Carson County, Texas, in compliance with the recordation requirements of the above noted rule.

This deed recordation was for a landfill to be used for the disposal of Class 2 and Class 3 non-hazardous wastes as defined in TAC Title 31, Chapter 335.1, and was for 82.29 acres of contiguous land located to the north of Zone 10. The deed recordation was for two tracts of land. Tract I was for 49.85 acres and contains all of a 9.135 acre inactive construction landfill area that was previously deed recorded in 1981. Tract II was for 32.44 acres and contains all of a 17.3325 acre inactive sanitary landfill previously deed recorded in 1981.

The existing construction landfill consists of excavated trenches with nominal sizes of 130 feet (ft.) wide x 600 ft. long x 20 ft. deep or 130 ft. wide x 400 ft. long x 20 ft. deep, providing the most efficient and cost effective configurations. The cells consist of four tiers (layers), with 3 ft. of compacted construction debris and 1 ft. of compacted dirt for each tier. Some smaller cells were also excavated to maximize the area available in Tract I (*Weller, K. 2015*).

Tract I also includes approximately 8 acres of support structures consisting of a covered equipment area, an office building, access roads, and parking areas.

From 1990 through 2015 Pantex has disposed of approximately 19,500 cubic meters of non-hazardous construction waste in the onsite construction landfill, with the average yearly volume approximately 750 cubic meters. During a period from March 1, 2006 through September 4, 2012 (6.5 years), Pantex disposed of approximately 6,658 cubic meters of non-hazardous construction waste in a 130 foot wide x 600 foot long x 20 foot deep landfill cell designated as Cell 14. The average yearly volume for this cell was approximately 1,024 cubic meters, with the smallest volume being approximately 722 cubic meters in 2007 and the largest volume approximately 1,841 cubic meters in 2011 (*Holeman, K. 2016*). Although the volume of non-hazardous construction waste sent to this cell could be considered typical, the actual yearly volume would be dependent on the scope of construction or demolition activities occurring during a given year.

## **2.2 PURPOSE AND NEED**

The purpose of this action would be to ensure that the Pantex Plant continues to have the capability to safely and securely dispose of Class 2 non-hazardous construction waste. This action is needed because the existing onsite non-hazardous construction waste landfill is projected to reach capacity in early 2019.

## **3.0 PROPOSED ACTION AND ALTERNATIVES**

The proposed action would be to design, construct, and operate an approximately 28 acre expansion adjacent to the existing onsite Class 2 non-hazardous industrial solid waste landfill used to dispose of construction debris in accordance with the requirements of 30 TAC 335.2(d)(1) and 335.5.

The current construction landfill area is nearing capacity, with the last available cell opened in September 2012 and anticipated to reach capacity in early 2019. The construction of an additional 28 acres of

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<sup>1</sup> In 1989, the Texas Water Commission (TWC) was the agency responsible for implementing the RCRA requirements for the State of Texas as defined in Title 31, Natural Resources and Conservation, Chapter 335 of the TAC. Senate Bill 2, First Called Session, 72<sup>nd</sup> Legislature, created the Texas Natural Resource Conservation Commission (TNRCC) as the successor to the TWC and Texas Air Control Board (TACB). To comply with the requirements of Senate Bill 2, the Texas Register created a new title in the TAC, Title 30, Environmental Quality, and administratively transferred all rules from TWC and TACB to Title 30, Part 1, effective as of September 1, 1993. The TNRCC was renamed the Texas Commission on Environmental Quality (TCEQ) effective as of September 1, 2002.



construction landfill is needed to ensure that the Pantex Plant would have the capability to safely and securely dispose of certain Class 2 non-hazardous construction waste onsite and avoid offsite transportation and disposal costs.

### **3.1 Proposed Action Project Description**

The proposed action would include the installation of approximately 3,185 linear foot of 8 foot high chain link fence to provide safety and security for the proposed construction landfill, and installation of a 24 foot wide gate to allow access from the existing construction landfill area to the proposed expansion area. The fence installation would include scraping the existing vegetation to provide a clear working area. All fencing installation would be completed by an outside contractor. Future maintenance of the fence line could include the use of herbicides to keep the area clear for collection of any blowing debris from the landfill.

Up to nine individual landfill cells (approximately 130 foot wide x 600 foot long x 20 foot deep) would be excavated in the proposed construction landfill area, requiring a total area of approximately 16 acres. The remaining approximately 12 acres would provide buffer areas between the cells and fencing and between the individual cells (See Figure 3 for location of proposed landfill expansion). The individual cells would be excavated one at a time, with excavation starting on the next cell when the current cell is approximately nine months from reaching capacity (See Figure 4 for an overhead view of a typical landfill cell). Each cell would require approximately four months to excavate. All cell excavations would be completed by CNS Waste Operations Department (WOD) personnel, or under their direction.

Excavation would include compliance with the Occupational Safety and Health Administration (OSHA) Excavation Standard 1926 Subpart P (29 CFR 1926) sloping and benching minimum requirements for type "B-45" soil. These requirements call for a minimum 1 foot vertical to 1 foot horizontal slope (45-degree angle) on a maximum 20 foot depth, or if benched, a 4 foot vertical to 4 foot horizontal benching to a maximum of 20 foot depth. Also, appropriate access and egress is required at 4 foot deep or more, as stated in the general requirements of the regulation. Because of the large equipment used to excavate a landfill cell, a more conservative 4 foot vertical to 9 foot horizontal benching to 20 foot deep would be used to allow for safer maneuvering of the equipment (See Figure 5). Because large trucks would be delivering construction debris to the cells, access and egress would be at both ends of the cells with a 1 foot vertical to 9 foot horizontal slope (See Figure 6).

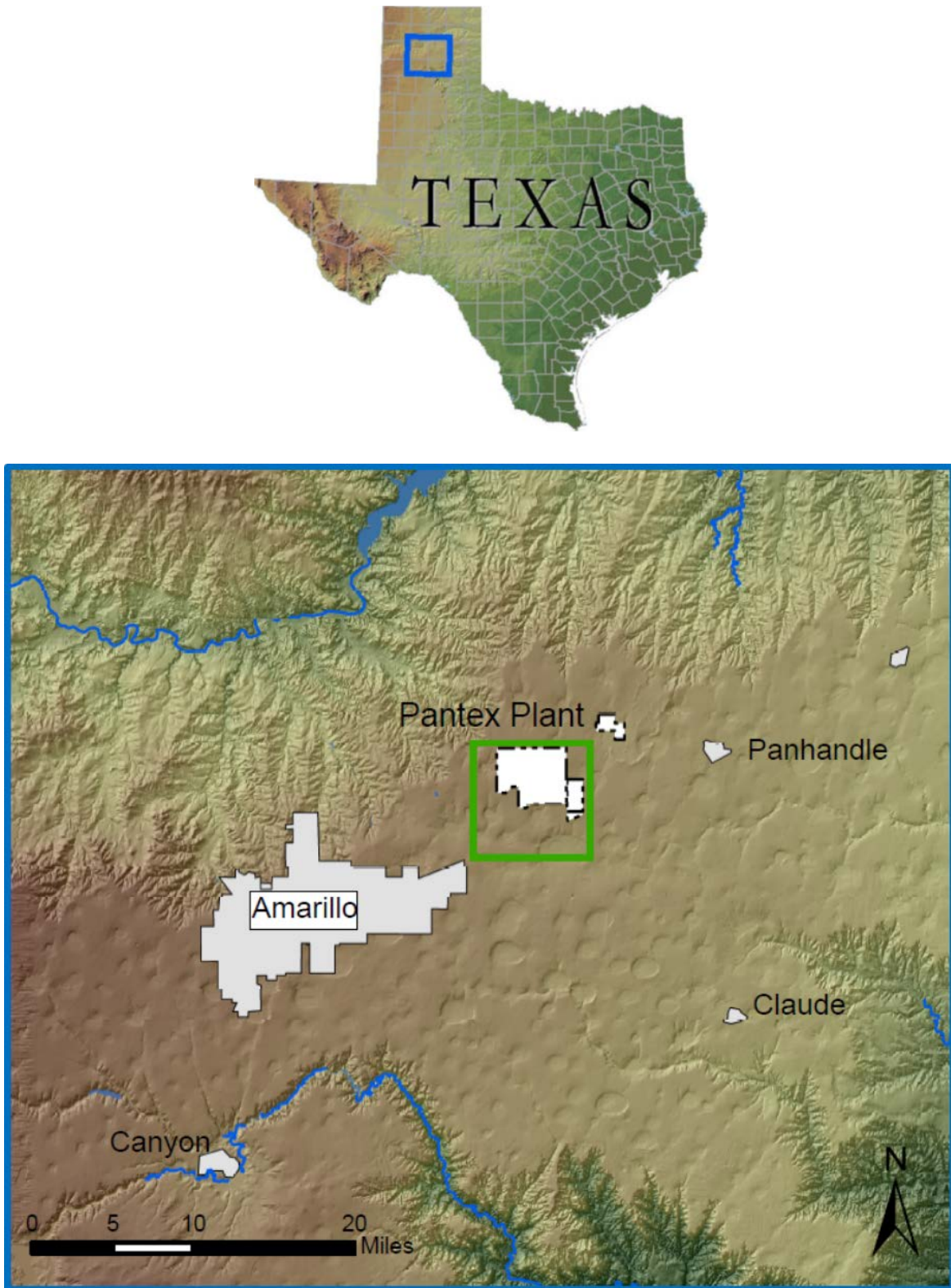
Information on the construction of the proposed cells is based on the construction of Cell 15, which was surveyed using global positioning system (GPS) equipment after construction was completed in June, 2010. Information on the volumes of construction debris for each of the proposed cells is based on the records of delivery to Cell 14 which received approximately 6,658 cubic meters of construction debris during 6.5 years, as noted in Section 2.0 of this document. Both Cell 14 and Cell 15 are the same size and configuration as the proposed cells.

With the 4 foot vertical to 9 foot horizontal benching and the 1 foot vertical to 9 foot horizontal slope at each end, approximately 22,875 cubic meters of soil would be removed to construct each cell. This soil would be stockpiled within the deed recorded area (although a minimum of 2 foot away from any excavation edge is required by OSHA regulations, excavated soil at the construction landfill is staged a minimum of 60 foot from the excavation to allow the safe operation of large equipment) and used to cover each debris tier with a minimum of one foot of compacted backfill soil, and complete the 3 foot of compacted backfill soil on top of the cells. Any remaining soil from the cell excavations would be used for maintenance of previously closed cells, including filling in depressions that develop from differential compaction.

Based on the volume of construction debris deposited in Cell 14 from March 1, 2006 to September 4, 2012, the proposed nine new cells would accommodate a total of approximately 59,922 cubic meters of construction debris. The longevity of the proposed cells would be dependent on the number and size of construction projects and deactivation and decommissioning projects scheduled during the life of the cells. The smallest amount of yearly construction debris deposited in Cell 14 was approximately 721.6 cubic meters in 2007. Based on this amount, the proposed construction landfill expansion would last approximately 83 years. The largest amount of yearly construction debris deposited in Cell 14 was approximately 1,841 cubic meters in 2011. Based on this amount, the proposed construction landfill expansion would last approximately 32.5 years. The average yearly amount of construction debris deposited in Cell 14 during 6.5 years was approximately 1,168 cubic meters. Based on the average of 1,168 cubic meters of construction debris per year, the proposed construction landfill expansion would last approximately 51 years.

Operation of the proposed construction landfill would be conducted by the CNS WOD, or under their direction, and include the following:

- Ensure that each load of material is accompanied by a Material Evaluation Form (MEF).
- Visual inspection of the load to ensure it meets the description on the MEF.
- Direct the transporter to the designated cell for unloading the material.
- Visually inspect the unloaded material to ensure it meets the description on the material evaluation form.
- Maintain records of all unloaded material and associated MEF.
- Spread the debris materials to a depth of no more than 3 foot on a daily basis.
- Cover the debris material with a minimum of 1 foot of backfill soil.
- Perform housekeeping duties around the cell for debris prior to the last covering for daily operations.
- Compacts backfill and debris layers.
- Secure the landfill by locking the gate when the operator is not present.
- Compact and cover landfill debris with a final cover of backfill at a minimum of 3 foot when a cell is at capacity or remains inactive for one year.
- Seed the inactive cell to establish a native grass cover for stabilization.
- Visually inspect inactive cells monthly to determine if depression has occurred.
- Cover depression areas with a minimum of 2 foot of backfill soil.
- Procure additional stockpiles of backfill material if needed.



**Figure 1: Pantex Plant Site Location**

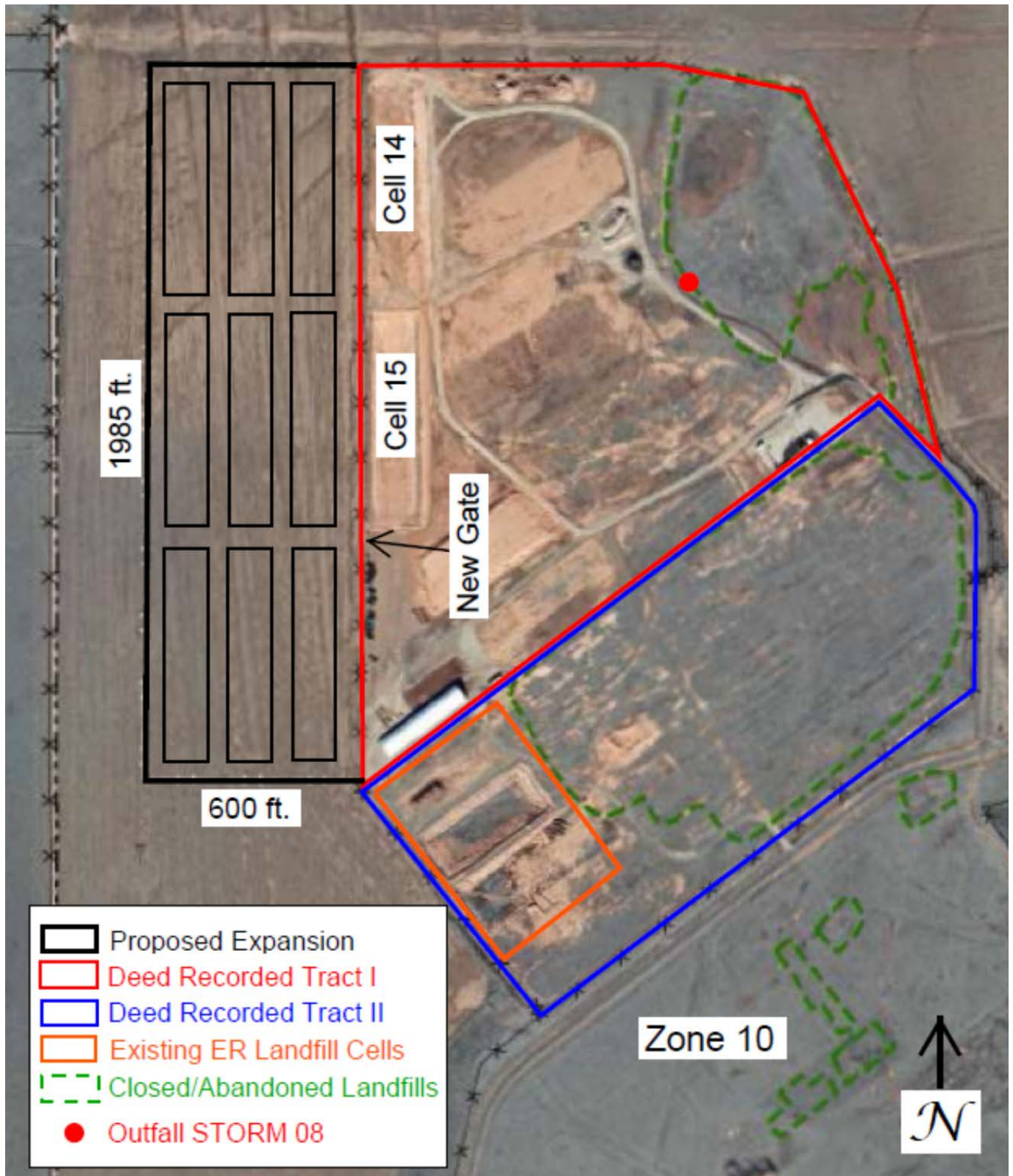


Figure 2: Location of Proposed Landfill Expansion

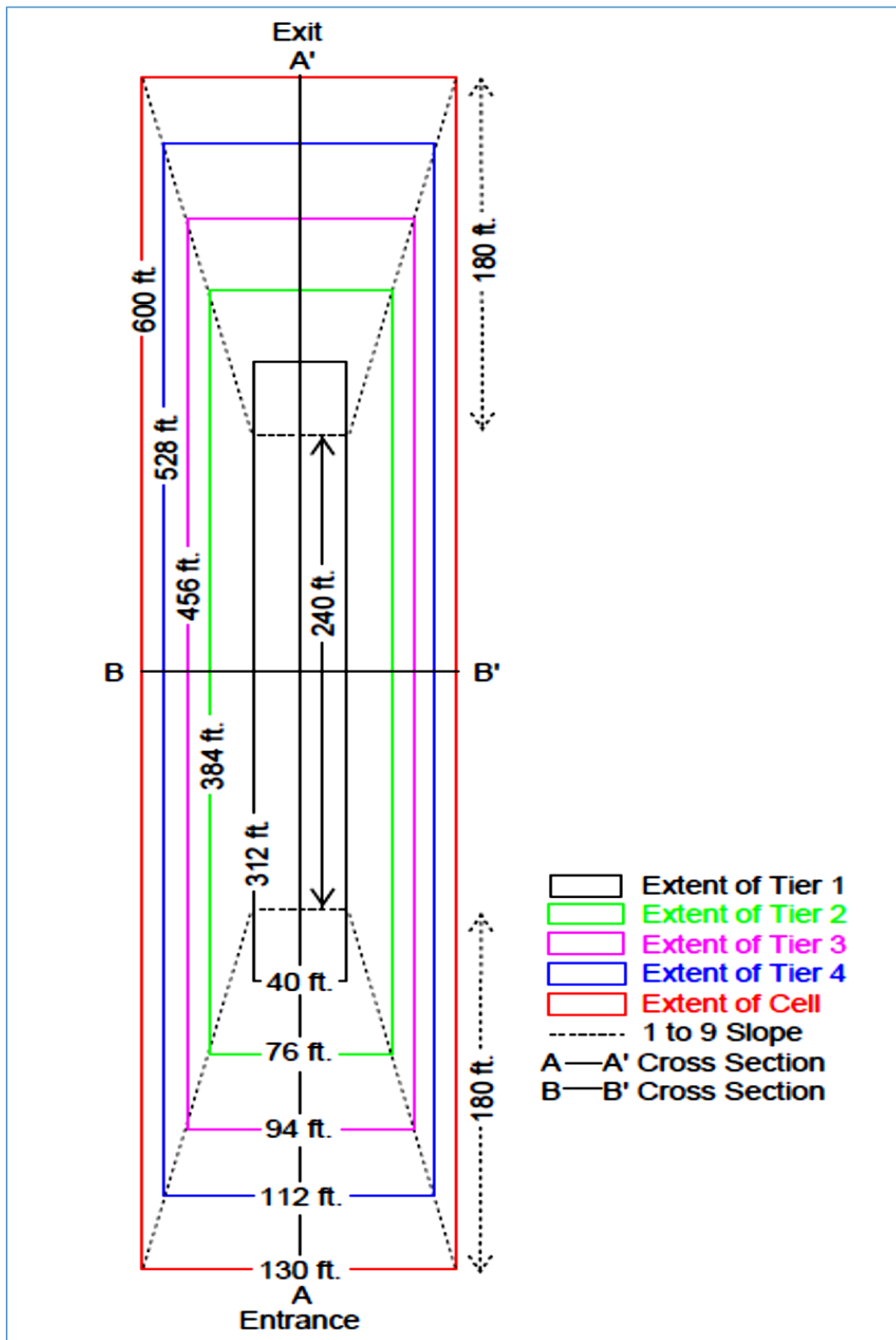


Figure 3: Overhead View of Typical Construction Landfill Cell

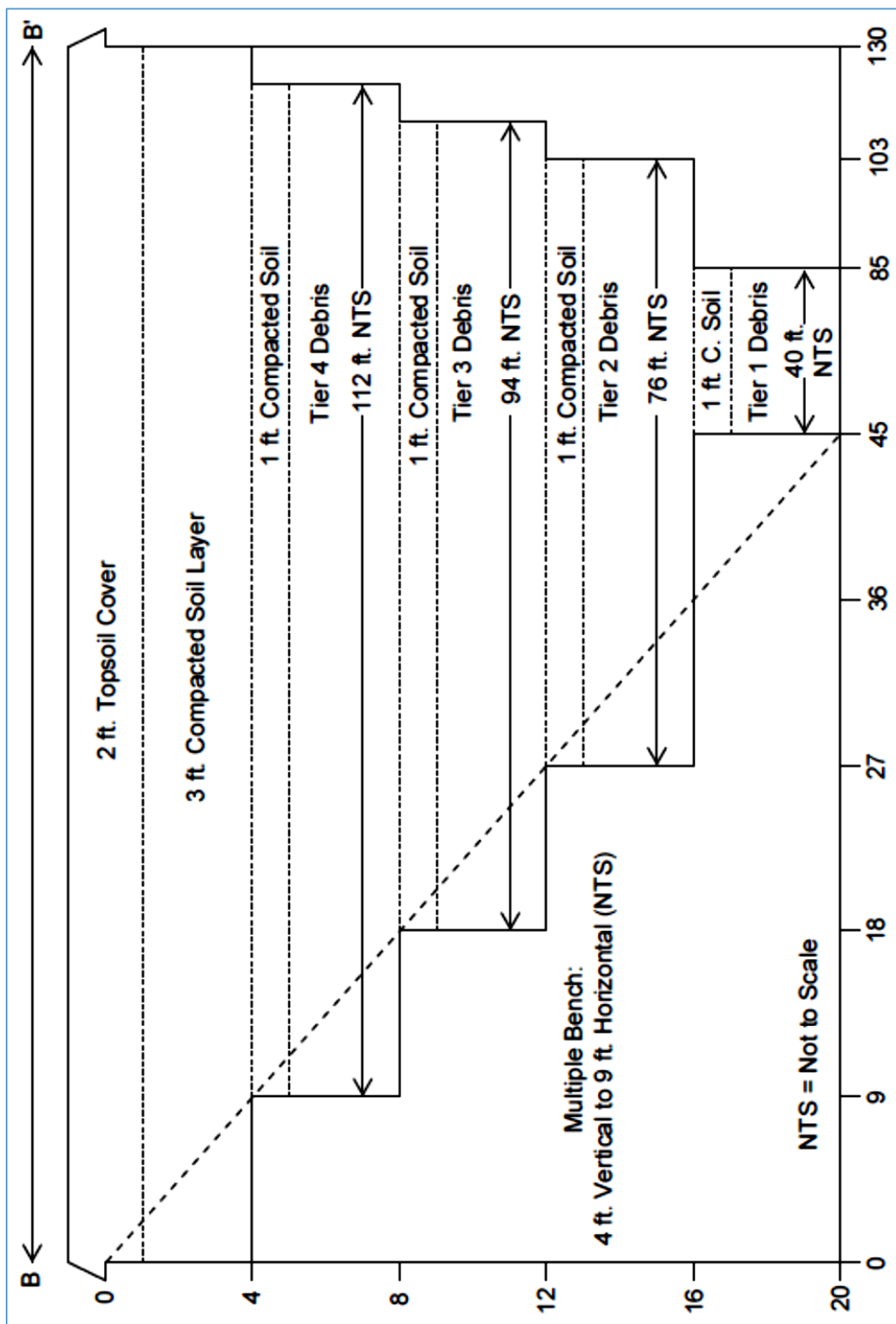


Figure 4: Width B – B' Cross-Section of Typical Construction Landfill Cell

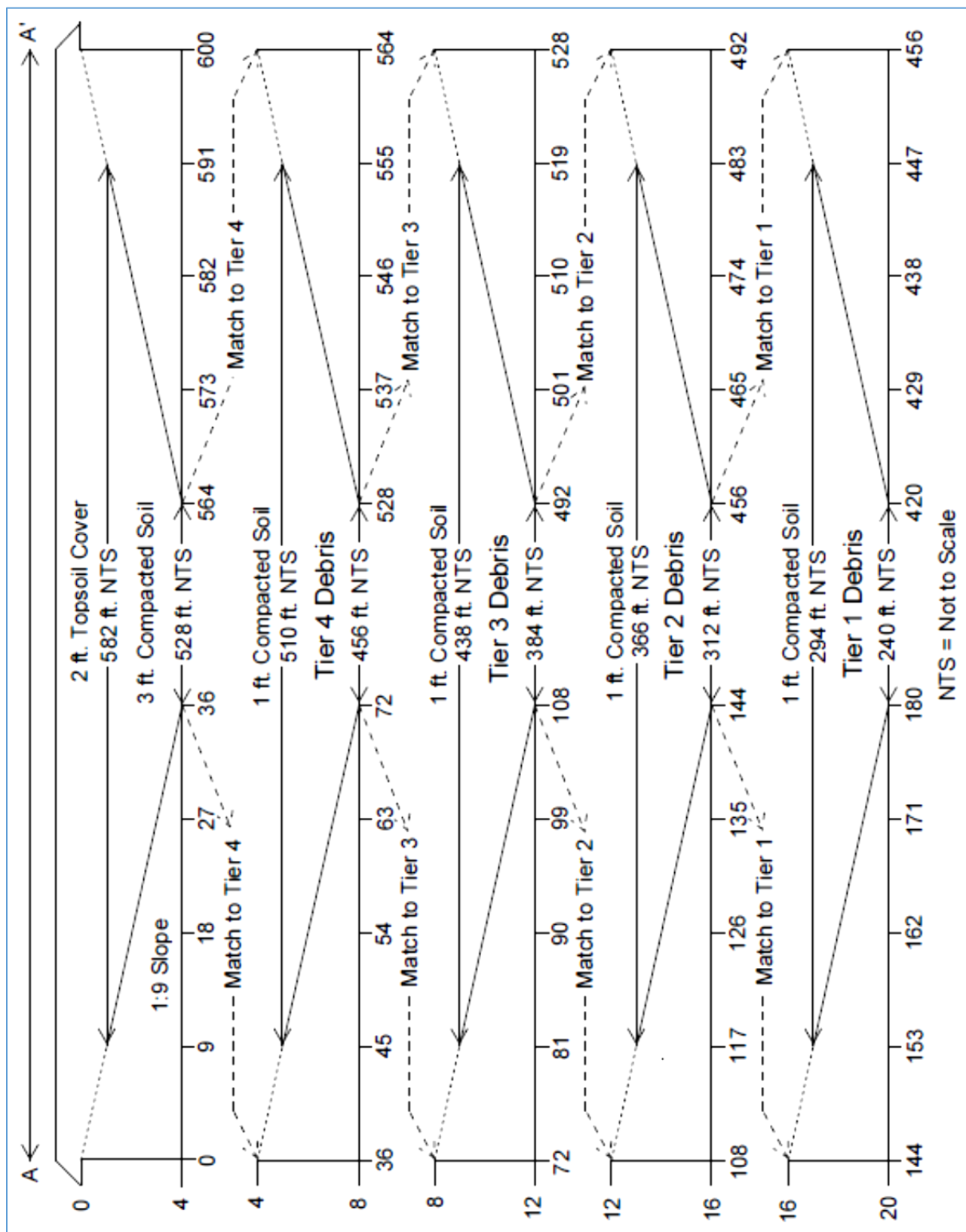


Figure 5: Length A – A' Cross-Section of Typical Construction Landfill Cell

### 3.2 NO-ACTION ALTERNATIVE

Continue to operate the existing Pantex Plant construction landfill without expansion and at the time capacity is reached, the landfill would be closed and no further Class 2 non-hazardous construction waste generating activities could occur.

### 3.3 OTHER ALTERNATIVES CONSIDERED

#### 3.3.1 Transport Class 2 Construction Waste to Off-Site Landfills

Continue to operate the Pantex Plant and would transport all Class 2 non-hazardous construction waste to off-site landfills for disposal which could include a potential contract with one or more of the following authorized Type 1 municipal solid waste landfills (*TCEQ, March 2017*) within a reasonable 150-mile distance from Pantex:

- City of Amarillo Landfill, approximately 35-miles from Pantex.
- City of Pampa Landfill, approximately 40-miles from Pantex.
- Southwest Landfill, approximately 45-miles from Pantex.
- City of Dumas Landfill, approximately 60-miles from Pantex.
- City of Plainview Landfill, approximately 95-miles from Pantex.
- City of Lubbock Landfill, approximately 145-miles from Pantex.
- West Texas Regional Landfill, approximately 145-miles from Pantex.

**NOTE:** Although there are 34 Type 1 and Type 4 landfills within the 150-mile distance of Pantex that could accept non-hazardous construction waste, 27 of these landfills are designated as arid exempt (AE) and are limited in the amount of waste they can accept during a year. Most of these AE designated landfills are in small towns, and it would be unreasonable to assume they could dispose of the amount of non-hazardous construction waste Pantex would generate and maintain their annual limits.

#### 3.3.2 Alternatives Considered But Dismissed From Further Consideration

The following alternatives listed in Table 3-1 were considered but dismissed from further consideration because they are not reasonable alternatives.

**Table 3-1. Initial Screening of Alternative Locations Dismissed from Further Consideration**

<b>Alternative</b>	<b>Reason for Elimination from Consideration</b>
Area north of West Gate	Based on the proximity to the western boundary of the Plant and to a surface danger zone immediately to the north of the area and additional acreage and equipment for support, this is not a reasonable alternative.
Other areas of the Main Plant Site	Eliminated based on the presence of underground utilities or restricted access to the areas.
Area of the Plant East of Farm-to-Market Road (FM) 2373	Eliminated based on the distance from the existing construction landfill, which would require personnel and equipment at both sites because the Environmental Restoration landfill is still in operation adjacent to the existing construction landfill and maintenance would be required to backfill any depressions that occur in the closed cells, and for approximately eight additional acres for support structures including a covered equipment area, a truck scale, an office building, access roads, and parking areas.



### **3.4 SCOPE OF THE ENVIRONMENTAL ASSESSMENT (EA)**

A sliding scale approach was used for analyzing potential environmental and socioeconomic effects and determined that certain aspects of the alternatives have a greater potential for creating environmental effects than others. The aspects with greater potential for impacts are discussed in more detail in this EA. Those aspects of the action judged to have little potential for impact are the following:

Environmental Justice: Executive Order 12898, Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations (*E.O. 12898*), directs Federal agencies to address the environmental justice impacts of their actions on minority and low-income populations. Based on 2010 census data 243 people reside within a 5-mile radius of the Pantex Plant, with no minorities or low-income families.

Floodplains/Wetlands: The proposed action site is not within the 100-year floodplain. The site can be categorized as upland and does not support wetlands. No floodplains or wetlands would be impacted during the construction or operation of this project.

Cultural Resources: A major thrust of the Plant's Cultural Resources Program has been systematic survey coverage of all areas surrounding playas located on DOE-owned 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 Plant, and probably throughout the Llano Estacado, will be located within approximately 1/4 mile of playas or their major drainages. Conversely, such sites will 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 *Pantex Plant Cultural Resource Management Plan (CRMP, 2004)*. Features related to more permanent occupation (such as hearths, tipi rings, fire-cracked rock concentrations, architectural evidence, or human burials) have not been found at any Pantex Plant sites, as either surface or subsurface expressions. Since at least the early 1900s, historic agricultural activities, such 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 NNSA Production Office (NPO) and the SHPO have agreed that the disturbed sites lack the integrity required for consideration of inclusion in the National Register. It is not anticipated that any activities from the proposed action would occur within 1/4 mile of a playa.

Special Status Wildlife Species Habitat: The proposed action would be located in an area subjected to annual cultivation for production of agricultural products (winter wheat and grain sorghum) and the action would not disturb the habitat of special status wildlife or plant species.

## **4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

### **4.1 REGIONAL SETTING**

The Pantex Plant is centered on approximately 17,503 acres (including Pantex Lake, land east of FM 2373, and Texas Tech University [TTU] leased land) in western 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 leased from TTU.

Pantex Plant is located on the Southern High Plains (SHP) portion of the Great Plains, at an elevation of approximately 3,500 feet above mean sea level (MSL). 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.

The primary surface deposits in the project area are the Pullman and Randall soil series, which grade downward to the Blackwater Draw Formation. This formation consists of about 15 meters (50 foot) of interbedded silty clays with caliche and very fine sand with caliche.

The principal surface water feature in the region is the Canadian River, which flows southwest to northeast approximately 17 miles north of the Plant. The Canadian River valley defines the northern boundary of the SHP. Plant surface waters do not drain into this system, but for the most part, 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. Two principal subsurface water-bearing units exist beneath Pantex Plant and adjacent areas: The Ogallala Aquifer and the underlying Dockum Group Aquifer. The vadose or unsaturated zone, above the Ogallala Aquifer consists of as much as 460 feet of sediments that lie between the land surface and the aquifer.

## **4.2 SITE-SPECIFIC DESCRIPTION AND ANALYSIS**

### **4.2.1 Land Use**

Affected Environment: 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 50 ft. 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 ft. at the southwest corner to 889 ft. 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.

Although the site for the proposed project is currently a cultivated area, adjacent shortgrass prairie with buffalograss (*Buchloe dactyloides*) and blue grama (*Bouteloua dactyloides*) as the dominant plant species, and 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 (*Spilogale 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 Pantex, 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 Pantex. It could be found at the proposed project site. The American and Artic 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 Pantex, nor is the habitat on the site considered unique compared to adjacent portions of the same grass stand.

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 and includes cropland, pastureland, rangeland, and forestland. Soil types classified as prime farmland covers the majority of Pantex Plant.

The Pantex Plant is comprised of 11,703 acres of DOE-owned land, including 9,100 acres in the main Plant area, 1,526 acres in four tracts purchased in the latter part of 2008 [adjacent to the main Plant area, but east of FM2373], and 1,077 acres approximately 2.4 miles to the northeast, at Pantex Lake. In addition, NNSA currently leases 5,450.74 acres of land south of the main Plant area from TTU for use as a safety and buffer zone.

Current land use on the 11,703 acres of DOE-owned land at Pantex includes 2,630 acres for operations, 4,387 acres of cultivated land, and 4,549 acres of rangeland/grass land (the rangeland/grass land includes 534 acres of wetlands). These acreages include 10 acres removed from cultivation and added to operations for permanent use by the wind turbine construction completed in 2014. The current area of 11,703 acres is the legal description that extends to the center of all public roadways surrounding the Plant. The land use categories do not extend into those surrounding public roadways and accounts for the 137 acre difference between the total of the land use categories and the Plant area total (*DOE/EIS-0225-SA-05*).

Environmental Consequences of Proposed Action: Approximately 28 acres of cropland would be permanently impacted by the proposed project and would remain in operations use after project completion. The site for the proposed project is cultivated upland that is currently in a winter wheat, grain sorghum, and fallow rotation (two crops in three years).

All soil generated as a result of landfill cell construction activities would be stockpiled and used for covering debris layers and completing the cell cap. Any excess soil would be used for maintenance of depressions that may occur in closed cells.

After a landfill cell is closed, approximately 2 foot of topsoil would be added and the area would be reseeded with the appropriate seed mix of native grasses for the soil type and land use. The grasses are best planted between February and April. Wheat can be planted in the fall to prevent erosion, and native grasses can be planted the following spring. If project construction were completed in May or June, the native grasses could still be planted, though that is not the ideal time for establishment.

If nests of birds were discovered in the proposed project site, 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 acreage of temporary disturbance left from the construction would be of use to the 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 Alternative: There would be no changes to current Pantex land use in the proposed project area.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: There would be no impacts to current Pantex land use with this alternative.

**Table 4-1. Land Resource Impacts by Land Use Categories (acres)**

<b>Total DOE Owned Pantex Land: 11,703 Acres</b>				
<b>Land Use Categories</b>				
Operations	Cultivated	Range/Grass	Wetlands	Other
<b>Current Values</b> (percent of total)				
2,630 (22.5 %)	4,387 (37.5 %)	4015 (34.3 %)	534 (4.5 %)	137 (1.2 %)
<b>Proposed Action</b> (percent change from current values)				
2,658 (+1.06 %)	4,359 (-0.66 %)	No Change	No Change	No Change
<b>No Action Alternative</b>				
No change from current values				
<b>Off-Site Landfill Alternative</b>				
No change from current values				

#### **4.2.2 Water Resources**

Affected Environment: The major surface water source near Pantex is the Canadian River, located about 17 miles northwest of the facility, which flows in a generally eastward direction into Lake Meredith, a constructed reservoir. 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.

Groundwater beneath the proposed site is first encountered approximately 265-ft. deep, and is perched above a low permeability fine-grained zone. The Ogallala Aquifer is present beneath the proposed site about 410 foot deep. None of the landfill construction or operation activities 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.

Currently, the only water resources used at the landfill is for re-establishing vegetation on a cell after it is closed. A cell is closed once every 6.5-years, and approximately 27,155 gallons of water is used on the area after it is seeded.

Current on-site landfill operations are in compliance with the requirements of the Pantex Multi Sector General Permit to Discharge under the Texas Pollutant Discharge Elimination System (TPDES), Permit No. TXR050000 (*TXR050000*), and the associated Storm Water Pollution Prevention Plan (SWPPP) for the Pantex Plant; which includes requirements for the 82.29 acres of existing landfill and for water sampling at Storm Water Outfall 08, located within the boundaries of the landfill.

Environmental Consequences of Proposed Action: Runoff with increased suspended solids could occur during the construction and operation of the proposed landfill and stockpiling of the excavated soil. Good engineering practices, including soil erosion and sediment control measures, and spill prevention and waste management practices, would minimize any suspended sediment and pollutant transport that could result in potential water quality impacts. The proposed landfill expansion would be in compliance with the requirements of the TPDES, which includes monthly and quarterly inspections, yearly storm water sampling for required metals, and twice yearly storm water sampling for total iron and total suspended

solids. The additional 28 acres of landfill expansion would be added to the SWPPP and would also be included during inspections for soil erosion and sediment control measures.

Approximately 27,155 gallons of water would continue to be used every 6.5-years during the revegetation of a landfill cell when it is closed. The proposed life of the landfill expansion would require a total of 244,395 gallons of water to support revegetation of the nine additional cells.

Environmental Consequences of No Action Alternative: There would be no changes to surface water drainage patterns or to the TPDES Permit due to requirements for inspecting, monitoring, and maintenance of previously closed cells. Because no cell revegetation would be needed, an average of approximately 4,700 gallons of water would be saved each year.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: There would be no changes to surface water drainage patterns or to the TPDES Permit due to requirements for inspecting, monitoring, and maintenance of previously closed cells at Pantex, but the off-site landfill would be required to meet the conditions of their TPDES permit. Any off-site water usage would be dependent on how the off-site landfill would be managed.

#### 4.2.3 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 Plant 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 the period 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 operations since the Pantex Plant is in an area of attainment or unclassified status of attainment for NAAQS.

The Title V Federal Operating Permit Program is administered and enforced by EPA Region 6 Office and the TCEQ. Pantex maintained documentation demonstrating that it was not a major source, as defined by the Federal Operating Permit Program. Pantex currently operates under a Potential to Emit Certification, submitted on January 4, 2010.

**Table 4-2. Air Quality Permit Limits and Actual Emissions (ASER, 2015)**

Certification of Potential to Emit (PTE) January 2010		Actual 2015 Emissions
Pollutant	Tons Per Year	
NO <sub>x</sub>	98.08	22.70
CO	28.53	4.04
VOC	33.17	1.43
SO <sub>2</sub>	5.14	0.09
PM	19.14	1.35
HF	2.00	0.12
HAP	20.36	0.86

#### 4.2.4 Visual Resources

Affected Environment: The topography of the project area is relatively flat. The office and production buildings at Pantex are visible to some landowners, and to traffic along Highway 60 and FM roads 2373, 683, and 293. As for the proposed site, it would be visible to Pantex employees as an agricultural area.

Environmental Consequences of Proposed Action: Heavy equipment and hauling operations, staging areas, landfill cell preparation activities, and operation of the construction landfill would denude approximately 28 acres of agricultural land, and create temporary adverse visual effects. The proposed new landfill would be adjacent to the existing landfill area, and from a distance would present a similar appearance. The approximately 72 acres of adjacent land to the north, west, and south of the proposed landfill would remain in cultivation.

Environmental Consequences of No Action Alternative: The current active on-site landfill would be closed and revegetated, which would return the area to a more typical shortgrass prairie and improve the visual resources.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: The current active on-site landfill would be closed and revegetated, which would return the area to a more typical shortgrass prairie and improve the visual resources.

#### **4.2.5 Noise**

Affected Environment: Sources of environmental noise offsite consist of background sounds from vehicular traffic on Highway 60 and FM roads, county roads, airport traffic, railroad traffic, and the operations of heavy equipment during agricultural activities.

Sources of environmental noise at Pantex Plant include background sounds from routine operations of the Plant, industrial processes, occasional HE testing, firearms training of security police officers, and ongoing construction and demolition. Average onsite sound levels are 40-60 decibels A-weighted (dBA) (NNSA, 2008).

Environmental Consequences of Proposed Action: The temporary increase in noise levels from proposed landfill cell construction activities and routine operation of the landfill 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 employees or adjacent landowners. Temporary, intermittent noise levels (between 80 and 100 dBA) could result from the use of heavy equipment like bulldozers, loaders, and large trucks during routine landfill operation activities. These levels attenuate rapidly with distance, and will not likely impact neighboring landowners because operation activities would be confined to the central portion of the Plant, away from residential populations.

Environmental Consequences of No Action Alternative: Without the routine operation of the construction landfill, there would be a reduction in the current onsite ambient noise levels.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: There would be a reduction in onsite noise levels due to no routine operations of a construction landfill, but offsite traffic noise would increase with up to 80 round trips per year to the offsite landfill.

#### **4.2.6 Human Health**

Affected Environment: Pantex workers and subcontractors involved in potentially hazardous operations are protected by administrative and engineering controls, and are 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 adhere to OSHA standards in performing all work.

Environmental Consequences of Proposed Action: The types of activities during the construction of new landfill cells and the routine operation of the landfill would include establishing and maintaining site access, with the site locked when the operator is not present. The construction of new cells, at minimum, would be in accordance with the sloping and benching requirements of OSHA Excavation Standard 1926 Subpart P, including the general requirements.

Environmental Consequences of No Action Alternative: There would be no changes to the current human health impacts.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: The impacts would be the same as the proposed Action.

#### **4.2.7 Transportation/Traffic**

Affected Environment: Regional and site transportation routes are the primary methods used to transport Pantex-affiliated employees, hazardous materials, and radioactive materials. Inter-zonal 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 (*EIS, 1996*).

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

Environmental Consequences of Proposed Action: There would be no impacts to offsite transportation or traffic because the construction and operation of the proposed landfill would occur within the industrialized area of Pantex, away from Plant boundaries. Construction and operation of the landfill would not impact the current onsite transportation or traffic activities at Pantex.

Environmental Consequences of No Action Alternative: There would be no impacts to onsite or offsite transportation or traffic activities.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: There would be increased onsite and offsite traffic, with up to approximately 80 round trips per year delivering waste to the offsite landfill located approximately 50 miles from Pantex.

#### **4.2.8 Waste**

Affected Environment: Waste at Pantex Plant is generated from ongoing weapons operations, HE production, and support operations such as medical services, vehicle maintenance activities, general office work, construction activities, environmental monitoring, laboratory activities, and environmental restoration activities (*EIS, 1996*).

Environmental Consequences of Proposed Action: The proposed Class 2 non-hazardous industrial solid waste landfill would only dispose of inert and insoluble materials such as bricks, concrete, glass, dirt, and certain plastic and rubber items that are not readily degradable. All potential waste material would be properly characterized and evaluated for pollution prevention opportunities prior to disposition. Other Class 2 non-hazardous industrial solid wastes, generally liquids, would be shipped to commercial facilities for treatment and disposal.

The estimates for the volume of construction waste that would potentially be disposed of in the proposed landfill is based on the waste delivery records to Cell 14, which was operational from March 1, 2006 to

September 4, 2012. During the 6.5 years Cell 14 was open, approximately 6,658 cubic meters of non-hazardous construction waste was deposited in the cell. The yearly average was approximately 1,168 cubic meters, with a minimum of 722 cubic meters in 2007 and a maximum of 1,841 cubic meters in 2012.

Based on the Cell 14 waste volume information, the nine proposed landfill cells would have the potential to hold 59,922 cubic meters of Class 2 construction waste. Based on the yearly average of waste to Cell 14, the proposed nine landfill cells would last an estimated 52 years. Based on the maximum yearly waste to Cell 14, the proposed nine landfill cells would last an estimated 33 years.

Although the estimate of total construction waste for the nine landfill cells would be fairly accurate, the yearly estimates and life of the landfill would be dependent on the number and size of construction or deactivation and decommissioning projects, and the ability to implement new pollution prevention opportunities through recycling, in any given year.

Environmental Consequences of No Action Alternative: The Plant would not have the ability to generate or dispose of Class 2 or Class 3 non-hazardous industrial solid waste and would not be able start construction or deactivation and decommissioning projects that would generate this class of waste.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: The impacts would be the same as the Proposed Action.

#### **4.2.9 Utilities and Infrastructure**

Affected Environment: The utilities at the existing construction landfill consists of a single overhead electric line to the landfill office. All above ground utilities that cross roadways have a minimum vertical and horizontal clearance of 16.5 foot.

Environmental Consequences of Proposed Action: The current utilities infrastructure would not change with the Proposed Action.

Environmental Consequences of No Action Alternative: The existing closed construction landfill cells at Pantex would still require maintenance and the current utilities infrastructure would not change with this alternative.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: The offsite landfills would already have any required utilities and infrastructure in place, so there would be no additional impacts from this alternative. The existing on-site closed landfill cells at Pantex would still require maintenance and the current utilities infrastructure would not change with this alternative.

#### **4.2.10 Socioeconomic Resources**

Affected Environment: Pantex employs approximately 3,400 people, including management and operating contractors, USDOE/NNSA and the National Laboratory staff, consultants, and oversight personnel. This employment figure has remained relatively constant for the past 10 years.

Pantex is the major employer in Carson County and is one of the largest employers within the four county regions of influence that includes Carson, Armstrong, Potter, and Randall counties, and the Amarillo metropolitan area.



Environmental Consequences of Proposed Action: The majority of construction materials and temporary construction workers for the installation of the security fence 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.

Environmental Consequences of No Action Alternative: The current socioeconomic resources would not change with this alternative.

Environmental Consequences of Alternative to Transport Class 2 Construction Waste to Off-Site Landfills: With approximately 1,168 cubic meters of additional Class 2 waste going to an off-site landfill yearly, there would be a potential for the landfill operator to hire additional permanent personnel.

## **5.0 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) could include:

- Construction of a new High Explosive Science and Engineering Facility
- Construction of a new Staging Facility
- Construction of a new Administrative Support Complex
- Construction of a new Intermediate Use of Force Facility
- Demolition projects within the Plant
- Construction of a new addition to an existing building
- Construction of power grid transmission lines in Carson, Potter, and Gray counties
- Private development of wind turbine generators (wind farms)

Analyzed resources, which could receive cumulative effects, are land use, water resources, biological resources, air quality and climate change, noise, and construction waste.

### **5.1 Land Use**

Construction related activities associated with land use are mostly temporary and short-term. Most of the acreage that is needed for the construction phases of these projects would be returned to the original condition of open space or cultivation. For the long-term impacts of these projects, only the footprint of the facilities would remain and the land not necessary for the footprint would be restored. Pipelines and some electrical connections are underground, so after installation, the surfaces would be returned to the original condition. Therefore, the incremental impact of the proposed action or the off-site landfill alternative, when added to those from actions of a similar nature, would be minor.

### **5.2 Water Resources**

Water uses during construction activities are generally associated with dust suppression, soil compaction, and the mixing of concrete. These uses are temporary and short-term. Occupancy of buildings would require long-term use of water resources similar to the normal use of office buildings. The incremental impact of the proposed action or the off-site landfill alternative, when added to those from actions of a similar nature, would be minor.

### **5.3 Biological Resources**

Impacts to wildlife habitat from AAI would be temporary and short-term for construction activities. Permanent structures and roads could result in habitat fragmentation. Additional power grid transmission

lines and wind turbine operations may result in cumulative avian and bat mortality, but the proposed action or the off-site landfill alternative would not contribute to these cumulative impacts.

#### **5.4 Air Quality**

Air quality and climate change impacts 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, which continues to meet the allowable emission limits and permit requirements. The incremental impact of the proposed action or the off-site landfill alternative, when added to those from actions of a similar nature, would not result in cumulative impacts on air quality.

#### **5.5 Noise**

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

#### **5.6 Construction Waste**

The planned or potential projects making up the AAI would probably not all be constructed simultaneously; therefore, the capacities of licensed disposal facilities should not be exceeded at any given time. The incremental impact of the Alternative to Transport Class 2 and Class 3 Construction Waste to Off-Site Landfills (if chosen), when added to those from actions of a similar nature, would be minimal.

### **6.0 ACCIDENT ANALYSIS**

The proposed action consists of activities that are performed on a routine basis in landfill construction and operation. Therefore, specialized accident types that are considered at NNSA facilities are not a consideration. The most serious potential accident considered for the Proposed Action would be a fatality, although none are likely to result from the proposed construction and operation of the landfill. Potentially, serious exposures to various hazards or injuries are possible during the construction and operation of the Proposed Action. Adverse effects could range from relatively minor (e.g., lung irritation, cuts, or sprains) to major (e.g., lung damage, broken bones, or fatalities). There would be no accident risk to the public from the proposed action.

The *Occupational Injuries and Illnesses and Fatal Injuries Profiles, 2011-2014*, from the U.S. Department of Labor - Bureau of Labor Statistics, found that solid waste landfill activities accounted for an average of 3.25 fatal work injuries per year. The Occupational Injuries and Illnesses and Fatal Injuries Profiles also includes the following data as causes of fatalities in the solid waste landfill industry: transportation incidents, contact with objects and equipment, and falls. Potential worst case industrial accident scenarios from the construction and operation of the proposed landfill could include: excavation collapse, contact by object or equipment, and falls (*BLS, 2014*).

Potential worst case industrial accident scenarios from the Alternative to Transport Class 2 and Class 3 Construction Waste to Off-Site Landfills would be the same as the proposed action, with the addition of transportation incidents due to the approximately 8,000 miles per year of large truck traffic on public highways to the off-site landfill. Transportation incidents accounted for approximately 41-percent of all workplace fatalities during 2014, therefore, risk for a fatality to the public would increase slightly with the additional traffic on public highways.

The No Action Alternative would not negatively impact public safety or accident rates at Pantex.

CNS has stringent safety requirements for all employees and contractors and the safety statistics are lower than national averages – in 2015 the total recordable case rate for Pantex was 0.43 (*Lacy, P., 2016*). The potential for any accidents related to the construction and operation of the proposed facility would be anticipated to be no worse than the current safety statistics at Pantex.

## **7.0 INTENTIONAL DESTRUCTIVE ACTS**

A fundamental principle 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 non-hazardous solid waste landfill is designated a Threat Level 4 (TL4) activity. This is the level assigned to an activity 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 activity 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 for the construction and operation of the landfill.

## **8.0 AGENCIES, ORGANIZATIONS, AND PERSONS CONTACTED**

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: The Draft EA will be provided to the Texas Parks & Wildlife Department and the U.S. Fish & Wildlife Service (FWS) for review.

Water Quality Management Plan, WOMP #156-030044: The Draft EA will be provided to the Texas State Soil and Water Conservation Board for determination of changes to land use at Pantex.

If finalized and approved, the EA and FONSI can be found at the following website:  
<http://www.pantex.com/mission/Pages/Environmental-Compliance-Documents.aspx>.

## 9.0 REFERENCES

- 7 CFR 657 U. S. Code of Federal Regulation, Title 7, Agriculture, Part 657, *Prime and Unique Farmlands*
- 10 CFR 1021 U. S. Code of Federal Regulations, Title 10, Energy, Part 1021, *National Environmental Policy Act implementing procedures*
- 29 CFR 1926 U. S. Code of Federal Regulations, Title 29, Labor, Subtitle B, *Regulations Relating to Labor*, Part 1926, *Safety and Health Regulations for Construction*, Subpart P, *Excavations*
- 40 CFR 700 U. S. Code of Federal Regulations, Title 40, Protection of the Environment, Parts 700-766, *Toxic Substances Control Act*
- 40 CFR 1500 U. S. Code of Federal Regulations, Title 40, Protection of the Environment, Parts 1500-1508, *Council on Environmental Quality*
- 30 TAC 335 Texas Administrative Code, Title 30, Environmental Quality, Part 1, Texas Commission on Environmental Quality, Chapter 335, *Industrial Solid Waste and Municipal Hazardous Waste*, Subchapter A, *Industrial Solid Waste and Municipal Hazardous Waste in General*
- ASER, 2015 U.S. Department of Energy, NNSA, Pantex Site Operations, Amarillo, Texas, *2015 Annual Site Environmental Report for Pantex Plant*, September 2016, <http://www.pantex.com/mission/Documents/Site%20Environmental%20Reports/2015%20Annual%20Site%20Environmental%20Report.pdf>
- BLS, 2014 U.S. Department of Labor - Bureau of Labor Statistics, *Occupational Injuries and Illnesses and Fatal Injuries Profiles, 2011-2014*, <http://www.bls.gov>
- CRMP U.S. Department of Energy, NNSA, Pantex Site Office, *Programmatic Agreement Among the U. S. Department of Energy/National Nuclear Security Administration/Pantex Site Office, The Texas State Historic Preservation Office, and the Advisory Council on Historic Preservation, Authorizing the Pantex Plant Cultural Resource Management Plan*, April 2004.
- DOE/EIS-0225-SA-05 U.S. Department of Energy, NNSA, Pantex Site Office, Amarillo, Texas, *Supplement Analysis for the Final Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components*, November 2012, <https://energy.gov/nepa/downloads/eis-0225-sa-05-supplement-analysis>
- EIS, 1996 U.S. Department of Energy, Washington, D.C., *Final Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components*, November 1996
- E.O. 12898 Executive Order 12898, *Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations*, February 16, 1994.
- Holeman, K. Personal communication with K. Holeman, CNS Pantex, January 6, 2016
- Lacy, P. Personal communication with P. Lacy, CNS Pantex, May 20, 2016

- NNSA, 2008     *Supplement Analysis for the Final Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components.* DOE/EIS-0225/SA-04, October 2008, <https://energy.gov/nepa/downloads/eis-0225-sa-04-supplement-analysis>
- TXR050000     Multi Sector General Permit to Discharge under the Texas Pollutant Discharge Elimination System (TPDES), Permit No. TXR050000, July 22, 2011
- TCEQ, March 2017     *Active Municipal Solid Waste Landfills in Texas, March 2017*  
<https://www.tceq.texas.gov/assets/public/permitting/waste/msw/msw-landfills-active.pdf>
- Weller, K.     Personal communication with K. Weller, CNS Pantex, December 4, 2015

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**APPENDIX A**  
**AGENCY CORRESPONDENCE**

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October 6, 2017

Mr. Jeff Flowers  
Consolidated Nuclear Security, LLC  
P.O. Box 30020  
Amarillo, TX 79120-0020

RE: Request for Comments on the Draft Environmental Assessment for the  
Construction Landfill Expansion Project at the U.S. Department of  
Energy, National Nuclear Security Administration, Pantex Plant

Dear Mr. Flowers:

Texas Parks and Wildlife Department (TPWD) has received the request for review of the proposed project referenced above. TPWD staff has reviewed the information provided and offers the following comments and recommendations concerning this project. For tracking purposes, please refer to TPWD project number 38477 in any return correspondence regarding this project.

#### **Project Description**

The proposed project would design, construct, and operate an approximately 28 acre expansion adjacent to the existing onsite Class 2 non-hazardous industrial solid waste landfill used to dispose of construction debris. The construction of the additional 28 acres of landfill is needed to ensure that the Pantex Plant would have the capability to safely and securely dispose of certain Class 2 non-hazardous construction waste on-site and avoid off-site transportation and disposal costs.

#### **Federal Laws**

##### *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) prohibits taking, attempting to take, capturing, killing, selling/purchasing, possessing, transporting, and importing of migratory birds, their eggs, parts and nests, except when specifically authorized by the Department of the Interior. This protection applies to most native bird species, including ground nesting species. The U.S. Fish and Wildlife Service (USFWS) Migratory Bird Office can be contacted at (505) 248-7882 for more information on potential impacts to migratory birds.

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To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

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**Recommendation:** If migratory bird species are found nesting on or adjacent to the project area, they must be dealt with in a manner consistent with the MBTA. TPWD recommends excluding vegetation clearing activities during the general bird nesting season, March through August, to avoid adverse impacts to this group. If clearing vegetation during the migratory bird nesting season is unavoidable, TPWD recommends surveying the area proposed for disturbance to ensure that no nests with eggs or young will be disturbed by operations. Any vegetation (trees, shrubs, and grasses) where occupied nests are located should not be disturbed until the eggs have hatched and the young have fledged.

#### **State Laws**

##### *Parks and Wildlife Code, Section 68.015*

Section 68.015 of the Parks and Wildlife Code regulates state-listed species. Please note that there is no provision for the capture, trap, take, or kill (incidental or otherwise) of state-listed species. A copy of *TPWD Guidelines for Protection of State-Listed Species*, which includes a list of penalties for take of species, can be found on the TPWD website.

##### Texas horned lizard (*Phrynosoma cornutum*) – State-listed Threatened

The Texas horned lizard can be found in open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees. The EA states that the Texas horned lizard may be present in the project area.

If present in the project area, the Texas horned lizard could be impacted by ground disturbing construction activities. Horned lizards may hibernate on-site in the loose soils a few inches below ground during the cool months from September/October to March/April. Construction in these areas could harm hibernating lizards. Horned lizards are active above ground when temperatures exceed 75 degrees Fahrenheit. If horned lizards (nesting, gravid females, newborn young, lethargic from cool temperatures or hibernation) cannot move away from noise and approaching construction equipment in time, they could be affected by construction activities.

**Recommendation:** TPWD recommends that a pre-construction survey be conducted to determine if horned lizards are present on the project site or directly adjacent to the construction area. A useful indication that the

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Texas horned lizard may occupy the site is the presence of harvester ant (*Pogonomyrmex barbatus*) nests since harvester ants are the primary food source of horned lizards. The survey should be performed during the warm months of the year when the horned lizards are active.

The EA states that 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.

**Recommendation:** TPWD supports efforts to minimize impacts to individual Texas horned lizards. Horned lizards observed during construction should be allowed to safely leave the site or be translocated by a permitted individual to a nearby area with similar habitat that would not be disturbed during construction. TPWD recommends that any translocations of reptiles be the minimum distance possible no greater than one mile, preferably within 100-200 yards from the initial encounter location.

Please note, for purposes of relocation, surveys, monitoring, and research, terrestrial state-listed species may only be handled by persons with appropriate authorization from the TPWD Wildlife Permits Office. For more information, please contact the Wildlife Permits Office at (512) 389-4647.

#### **Rare Species**

In addition to state and federally-protected species, TPWD tracks special features, natural communities, and rare species that are not listed as threatened or endangered. TPWD actively promotes their conservation and considers it important to evaluate and, if necessary, minimize impacts to rare species and their habitat to reduce the likelihood of endangerment and preclude the need to list. These species and communities are tracked in the Texas Natural Diversity Database (TXNDD). The most current and accurate species occurrence data can be requested from the TXNDD website.

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The following rare species have been documented within 1.5 miles of the project area in the TXNDD.

- Mountain plover (*Charadius montanus*)
- Black-tailed prairie dog (*Cynomys ludovicianus*)
- Swift fox (*Vulpes velox*)

The EA states that trapping and spotlight surveys have been conducted on Pantex and Texas Tech University property to document the presence or absence of swift fox and plains spotted skunk (*Spilogale putorius interrupta*) and 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.

Please note that the absence of TXNDD information in an area does not imply that a species is absent from that area. Given the small proportion of public versus private land in Texas, the TXNDD does not include a representative inventory of rare resources in the state. Although it is based on the best data available to TPWD regarding rare species, the data from the TXNDD do not provide a definitive statement as to the presence, absence or condition of special species, natural communities, or other significant features within your project area. These data are not inclusive and cannot be used as presence/absence data. This information cannot be substituted for on-the-ground surveys.

**Recommendation:** Please review the TPWD county list for Carson County, as rare species could be present, depending upon habitat availability. These lists are available on the Rare, Threatened, and Endangered Species of Texas website. If during construction, the project area is found to contain rare species, natural plant communities, or special features, TPWD recommends that precautions be taken to avoid impacts to them. The USFWS should be contacted for species occurrence data, guidance, permitting, survey protocols, and mitigation for federally-listed species. For USFWS threatened and endangered species lists, please see the USFWS Information for Planning and Consultation website.

Determining the actual presence of a species in a given area depends on many variables including daily and seasonal activity cycles, environmental activity cues, preferred habitat, transiency and population density (both wildlife and human). The absence of a species can be demonstrated only

Mr. Jeff Flowers  
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with great difficulty and then only with repeated negative observations, taking into account all the variable factors contributing to the lack of detectable presence. If encountered during construction, measures should be taken to avoid impacting wildlife.

TPWD strives to respond to requests for project review within a 45 day comment period. Responses may be delayed due to workload and lack of staff. Failure to meet the 45 day review timeframe does not constitute a concurrence from TPWD that the proposed project will not adversely impact fish and wildlife resources.

TPWD advises review and implementation of these recommendations. If you have any questions, please contact me at (806) 761-4936 or [Richard.Hanson@tpwd.texas.gov](mailto:Richard.Hanson@tpwd.texas.gov).

Sincerely,



Rick Hanson  
Wildlife Habitat Assessment Program  
Wildlife Division

RH: 38477

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**TEXAS STATE SOIL AND WATER CONSERVATION BOARD**  
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*Protecting and Enhancing Natural Resources for Tomorrow*

October 6, 2017

Mr. Jeff Flowers, Manager, Environmental Compliance  
Consolidated Nuclear Security, LLC  
P.O. Box 30020  
Amarillo, TX 79120-0020

**Comments on the Draft Environmental Assessment for the Construction Landfill Expansion Project at  
the US-DOE, National Nuclear Security Administration, Pantex Plant**

Dear Mr. Flowers,

After review of the Environmental Assessment titled Construction Landfill Expansion Project, it was determined that the proposed project will not have any impact on the land area contained within Water Quality Management Plan (WQMP) 156-03-0044.

Should clarification of this letter be necessary or if we may be of further assistance, please contact me at (806) 839-1030 or at the address shown below.

Sincerely,

Glenn Baker  
Regional Manager  
Hale Center Regional Office