

TABLE S-2.—Summary Comparison of Environmental Impacts of Pit Storage Operations at Pantex Plant and Alternative Pit Storage Relocation Sites

PANTEX PLANT (PIT STORAGE IMPACTS ONLY—20,000 PITS)	ALTERNATIVE PIT STORAGE RELOCATION SITES			
	NEVADA TEST SITE	SAVANNAH RIVER SITE	HANFORD SITE	MANZANO WSA
	SITE FACILITIES			
No change in the site's security force.	A small increase in the site's security force.	A small increase in the site's security force.	A small increase in the site's security force.	A small increase in the site's security force.
No change in the site's annual electrical demand.	Annual electrical demand of 4,110 MWh/yr would be 2.3 percent of the site's remaining system capacity.	Annual electrical demand of 4,110 MWh/yr would be 0.2 percent of the site's remaining system capacity.	Annual electrical demand of 4,110 MWh/yr would be a 1.2 percent increase over the site's 1994 usage of 345,500 MWh.	Annual electrical demand of 4,110 MWh/yr would be a 0.7 percent of the site's remaining system capacity.
No major modifications needed.	DAF: No major modifications needed. P-Tunnel: Construction of access control at the mouth of the tunnel.	No major modifications needed.	No major modifications needed.	No major modifications needed.
	LAND RESOURCES			
Additional magazines in Zone 4 would be used for pit storage. No change in land use.	DAF: No land disturbance or change in land use. P-Tunnel: Construction of access control in previously disturbed portal area. No change in land use.	No land disturbance or change in land use.		
	GEOLOGY AND SOILS			
No soil disturbance.	DAF: No soil disturbance. P-Tunnel: Construction of access control at the mouth of P-Tunnel in a previously disturbed area.	No soil disturbance.		
	WATER RESOURCES			

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PANTEX PLANT (PIT STORAGE IMPACTS ONLY—20,000 PITS)	ALTERNATIVE PIT STORAGE RELOCATION SITES		
	NEVADA TEST SITE	SAVANNAH RIVER SITE	HANFORD SITE
Operations would not impact surface water or groundwater. The annual water demand would be negligible. The wastewater would not have a measurable effect on groundwater quality.			MANZANO WSA
	AIR QUALITY		
Impacts to air quality from normal pit storage operations would result entirely from vehicle emissions which would add negligible amounts to regional emissions.	Impacts to air quality from normal pit storage operations would result entirely from vehicle emissions. The emissions have been determined not to exceed the specified threshold levels for the Albuquerque-Rio Grande Intrastate Air Quality Control Region.		
	ACOUSTICS		
Noise impacts from the pit transportation vehicles and the air conditioning and heating equipment associated with pit storage personnel would be minimal at any of the sites.			

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	NEVADA TEST SITE	SAVANNAH RIVER SITE	HANFORD SITE
	BIOTIC RESOURCES		
No impacts to sensitive species, their habitats, or wetlands are anticipated. No impacts to biotic resources would be expected.	No impacts to sensitive species, their habitats, or wetlands would be expected. DAF: Area of infrequent desert tortoise activity. No impacts would be expected. P-Tunnel: No desert tortoise activity. No impacts to biotic resources would be expected.	No sensitive species, habitats, or wetlands would be disturbed. No sensitive species reside at P-Reactor. No impacts to biotic resources would be expected.	No sensitive species, habitats, or wetlands would be disturbed. No sensitive species reside at FMEF. No impacts to biotic resources would be expected.
	CULTURAL RESOURCES		
Pit storage activities would not disturb any of the resource sites. Therefore, no impacts would be expected.	DAF: Nine cultural resource sites have been identified, but were not recommended for NRHP eligibility. P-Tunnel: No historic resources have been found. Pit storage activities would not result in any direct impacts to cultural resources.	No cultural resources have been found in the vicinity of P-Reactor. Pit storage activities would not result in any impacts to cultural resources.	No cultural resources have been found in the vicinity of the FMEF. Pit storage activities would not result in any impacts to cultural resources.
	SOCIOECONOMIC RESOURCES		
While pit storage activities at Pantex Plant require security personnel, these personnel are also required for the other storage activities in Zone 4. The security requirements would not change with or without pit storage.	Pit storage activities would require 150 personnel (30 facility, 120 security). Impacts of this employment on each region's economy would be negligible.		

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	NEVADA TEST SITE	SAVANNAH RIVER SITE	HANFORD SITE
	INTRASITE TRANSPORTATION		
Pit storage at Pantex Plant would not result in any impacts beyond those described for all intrasite transportation and staging operations in Table S-1.	Worker exposure at NTS from normal pit unloading and transfer operations would be 283 person-rem for 20,000 pits and 113 person-rem for 8,000 pits, resulting in 0.11 and 0.04 excess fatal cancers, respectively. Pit loading operations at Pantex Plant would result in an additional 283 person-rem for 20,000 pits or an additional 113 person-rem for 8,000 pits.	Worker exposure at SRS from normal pit unloading and transfer operations would be 283 person-rem for 20,000 pits and 113 person-rem for 8,000 pits, resulting in 0.11 and 0.04 excess fatal cancers, respectively. Pit loading operations at Pantex Plant would result in an additional 283 person-rem for 20,000 pits or an additional 113 person-rem for 8,000 pits.	Worker exposure at Hanford from normal pit unloading and transfer operations would be 113 person-rem for 8,000 pits, resulting in 0.04 excess fatal cancers. Pit loading operations at Pantex Plant would result in an additional 113 person-rem for 8,000 pits.
	WASTE MANAGEMENT		
The pit storage operations would generate less than 1 cubic meter each of low-level mixed, low-level, and hazardous waste annually. This amount of waste does not impact current waste management at Pantex Plant.	The pit storage operations would generate less than 1 cubic meter each of low-level mixed, low-level, and hazardous waste each annually. This amount of waste would not impact current waste management at any of the sites.		

TABLE S-2.—Summary Comparison of Environmental Impacts of Pit Storage Operations at Pantex Plant and Alternative Pit Storage Relocation Sites-Continued

PANTEX PLANT (PIT STORAGE IMPACTS ONLY—20,000 PITS)	ALTERNATIVE PIT STORAGE RELOCATION SITES		
	NEVADA TEST SITE	SAVANNAH RIVER SITE	HANFORD SITE MANZANO WSA
	HUMAN HEALTH		
The range of potential accidents is dominated by an aircraft accident capable of causing a release from a pit storage magazine. The likelihood of this incident is extremely unlikely (frequency of occurrence: less than 10^{-4} and equal to or greater than 10^{-6} per year). A person in the vicinity of the plant has an approximately 2.5×10^{-12} increase in fatal cancer risk from potential aircraft crash plutonium dispersal accidents from pit storage magazines only.	The range of potential accidents is dominated by the puncture of a pit at the DAF due to a forklift accident (frequency per single pit handling is extremely unlikely [10^{-4} to 10^{-6}]).	The range of potential accidents is dominated by the puncture of a pit at the P-Reactor due to a forklift accident (frequency per single pit handling is extremely unlikely [10^{-4} to 10^{-6}]).	The range of potential accidents is dominated by the puncture of a pit at the Manzano WSA due to a forklift accident (frequency per single pit handling is extremely unlikely [10^{-4} to 10^{-6}]).
	The impacts of this accident would be 3.3×10^{-5} person-rem to the public in the vicinity of NTS, resulting in a risk of 1.1×10^{-15} excess fatal cancers/yr to an average member of the public.	The impacts of this accident would be 4.6×10^{-3} person-rem to the public in the vicinity of SRS, resulting in a risk of 3.0×10^{-15} excess fatal cancers/yr to an average member of the public.	The impacts of this accident would be 4.0×10^{-2} person-rem to the public in the vicinity of KAFB, resulting in a risk of 2.6×10^{-14} excess fatal cancers/yr to an average member of the public.
	AIRCRAFT ACCIDENTS		
An aircraft accident capable of causing a release from a pit storage magazine is extremely unlikely (frequency of occurrence: less than 10^{-4} and equal to or greater than 10^{-6} per year). A person in the vicinity of the plant has an approximately 2.5×10^{-12} increase in fatal cancer risk from potential aircraft crash plutonium dispersal accidents from pit storage magazines only.	The annual aircraft hit probability hazard frequency at the DAF at NTS is 1.5×10^{-6} . Due to the construction of the DAF, a breach of pit containers in storage from aircraft impact resulting in a release of Pu is not reasonably foreseeable (frequency of occurrence: less than 10^{-6} per year). The P-Tunnel would be immune from aircraft accidents.	The annual aircraft hit probability hazard frequency at the P-Reactor at SRS is 1.2×10^{-6} . Due to the construction of the P-Reactor, a breach of pit containers in storage from aircraft impact resulting in a release of Pu is not reasonably foreseeable (frequency of occurrence: less than 10^{-6} per year).	The annual aircraft hit frequency at Manzano is 8.8×10^{-5} . Due to construction of magazines designated for potential storage of pits, a breach of pit containers in storage from aircraft impact resulting in a release of Pu is not reasonably foreseeable (frequency of occurrence: less than 10^{-7} per year).

TABLE S-2.—Summary Comparison of Environmental Impacts of Pit Storage Operations at Pantex Plant and Alternative Pit Storage Relocation Sites-Continued

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	NEVADA TEST SITE	SAVANNAH RIVER SITE	HANFORD SITE	MANZANO WSA
	INTERSITE TRANSPORTATION OF NUCLEAR AND HAZARDOUS MATERIALS (TRANSPORTATION OF PITS ONLY)			
Storage of all pits at Pantex Plant (i.e., the Proposed Action) would not require additional intersite transportation. Therefore, there would be no additional impacts to the public at Pantex Plant.	The transportation of a maximum of 20,000 pits to NTS for storage would result in a cumulative dose of 2.0 person-rem to the public. This would result in 1.0×10^{-3} excess cancer fatalities from incident-free operations.	The transportation of a maximum of 20,000 pits to SRS for storage would result in a cumulative dose of 3.0 person-rem to the public. This would result in 1.5×10^{-3} excess cancer fatalities from incident-free operations.	The transportation of a maximum of 8,000 pits to Hanford Site for storage would result in a cumulative dose of 1.2 person-rem to the public. This would result in 6.0×10^{-4} excess cancer fatalities from incident-free operations.	The transportation of a maximum of 20,000 pits to Manzano WSA for storage would result in a cumulative dose of 0.5 person-rem to the public. This would result in 2.5×10^{-4} excess cancer fatalities from incident-free operations.
	ENVIRONMENTAL JUSTICE			
Normal operations would not have any offsite impact. Abnormal events would not disproportionately impact minority or low-income populations.	Normal operations would not have any offsite impact at any of the sites. Abnormal events would not disproportionately impact minority or low-income populations.			

DAF - Device Assembly Facility
 FMEF - Fuels and Materials Examination Facility
 MWh - Megawatt-hours
 Pu - Plutonium
 SRS - Savannah River Site
 SST - Safe Secure Tractor Trailer
 WSA - Weapons Storage Area