DEPARTMENT OF ENERGY
NATIONAL NUCLEAR SECURITY ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT and
FLOODPLAIN STATEMENT OF FINDINGS FOR

PROPOSED PERCHED GROUNDWATER CORRECTIVE MEASURES

FINAL ENVIRONMENTAL ASSESSMENT: The *Environmental Assessment (EA) for the Proposed Perched Groundwater Corrective Measures* (DOE/EA-1579) (attached) provides sufficient evidence and analysis for the Department of Energy (DOE)/National Nuclear Security Administration (NNSA) to conclude that potential adverse effects from implementing corrective measures proposed in the *Corrective Measure Study/Feasibility Study for the Pantex Plant* (CMS/FS) would be minimal, under normal conditions. A Finding of No Significant Impact (FONSI) is appropriate for the Proposed Action.

The corrective measures proposed in the CMS/FS were selected for evaluation after considerable study of available conventional and innovative remedial technologies. A set of options was developed based on experience gained through treatability studies conducted at the Plant, Interim Corrective Measure (ICMs), ongoing analyses of the existing Perched Groundwater Pump and Treat System (PGPTS), groundwater modeling, site knowledge, and application of professional engineering judgment.

The scenarios providing the largest reduction in mass leaving the model boundaries, and greatest extraction of impacted perched groundwater, were developed into corrective measure options. Six corrective measure options were selected. These options are based on computer modeling focused on flow and transport within the perched groundwater flow system. Five suites of modeling scenarios, totaling 38 separate simulations, were completed to evaluate the remedial potential of no action and the corrective measure options evaluated under the proposed action. These options have one characteristic in common in that there is no injection of the treated groundwater back into the perched zone.

The EA evaluated two alternatives: the Proposed Action, comprised of the six corrective measure options, and the No Action Alternative.

The six corrective measure options that make up the Proposed Action are:

- Monitored Natural Attenuation (MNA)
- Existing Pump and Treat with MNA
- Enhanced Pump and Treat Using Horizontal Wells with MNA
- Enhanced Pump and Treat Using Vertical Wells with MNA
- Targeted Treatment with MNA
- Enhanced Pump and Treat with Targeted Treatment and MNA.

The EA considered the cumulative effects of the corrective measures included in the Proposed Action and determined that the impacts would be temporary and would not contribute significantly to cumulative impacts from all area activities within the past, present, and reasonably foreseeable future.

FLOODPLAIN STATEMENT OF FINDINGS: A detailed floodplain assessment is provided in Appendix B of the EA. Corrective Measure Option 6, Enhanced Pump and Treat with Targeted In Situ

Treatment and MNA, is the only option in the Proposed Action with potential to impact the 100-year floodplain of Playa 1. This option would propose to drill up to ten vertical extraction wells, install up to 4,000 feet of conveyance lines, and provide approximately 32,000 square feet of road to provide access to the new extraction wells. It would be located in the 100-year floodplain to maximize the effects of groundwater extraction due to the thick, permeable, channeled, subsurface gravels in the area near Playa 1. The ability to extract a large volume of groundwater would reduce the vertical hydraulic pressure and slow the movement of potential perched groundwater contaminants that may affect offsite areas.

Two negative effects in the Playa 1 floodplain have been identified - the potential for erosion and sedimentation during drilling, trenching, and re-grading activities, and the potential for displacing floodplain volume with the installation of the extraction systems on the well pads. The negative effects of erosion and sedimentation would be minimized by controls such as silt/sediment fencing, geotextiles, riprap, gabions, etc. The negative effects of displacing floodplain volume would be mitigated by placing, when possible, any extraction wells outside the boundaries of the 100-year floodplain at Playa 1.

The proposed project floodplain activities would not significantly affect storage capacity in the floodplain, nor result in significant changes in flooding frequency, intensity, or duration, nor significantly impact other floodplain values. The activities would comply with State and local floodplain requirements.

PREDECISIONAL DRAFT REVIEW: On March 1, 2007, DOE/NNSA invited review and comment on the pre-decisional EA by publishing a Notice of Availability in local newspapers. The document was made available to the general public by placing it in the DOE Public Reading Rooms located in the cities of Amarillo and Panhandle, Texas and was also accessible on the Pantex Plant website at www.pantex.com. Shortly thereafter, the DOE/NNSA invited review and comment on the pre-decisional EA from the landowners that would be directly affected by the proposed project. The review and comment period ended on April 5, 2007.

A Notice of Proposed Floodplain Action was published in local papers on November 30, 2006. A 15-day public review period of the Floodplain Assessment will occur upon issuance of this FONSI and EA before any floodplain action will occur.

AGENCY CONSULTATIONS: The Panhandle Regional Planning Commission received a copy of the pre-decisional EA in its capacity as the Single Point of Contact for the State of Texas. No comments were received.

The State Environmental Coordinator for the U.S. Department of Agriculture was provided a copy of the pre-decisional EA at his request. No comments were received.

PREDECISIONAL DRAFT COMMENTS: Comments were received from one landowner directly affected by the proposed project. Information of significance raised by the comments was incorporated into the final EA.

FINDING: Based on the Environmental Assessment, which analyzes the consequences of the relevant issues of environmental concern for the Proposed Action, the United States Department of Energy, NNSA, finds that there would be no significant impact from implementing corrective measures proposed in the *Corrective Measure Study/Feasibility Study for the Pantex Plant* (CMS/FS). This Finding of No Significant Impact is pursuant to the National Environmental Policy Act of 1969 [42 U.S.C. 4321 et. seq.], the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act [40 CFR 1500], and the Department of Energy National Environmental Policy Act Implementing Procedures [10 CFR 1021]. The Floodplain Statement

of Findings is pursuant to the Department of Energy Compliance With Floodplain/ Wetlands Environmental Review Requirements [10 CFR 1022]. No environmental impact statement is required for this proposal.

Signed in Amarillo, Texas this 15th day of June, 2007.

Steven C. Erhart
Acting Manager

FOR FURTHER INFORMATION: For further information on the proposed project, this FONSI, or the EA for the proposed project, please contact:

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

Copies of the FONSI with the attached EA will be available for public viewing at the following Department of Energy reading rooms:

U.S. Department of Energy Reading Room, Lynn Library/Learning Center, Amarillo College, Washington Street Campus, 2201 S. Washington St., Amarillo, Texas (806) 371-5400

U.S. Department of Energy Reading Room, Square House Museum, Corner of 5th Street and Highway 207, Panhandle, Texas (806) 537-3524