



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

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October 2, 2006

Mr. Johnny Guelker (PXSO-ESEP)
Lead for Site Support
U.S. Department of Energy
Albuquerque Field Office
P.O. Box 30030
Amarillo, TX 79120-0030

Mr. Dennis Huddleston
Manager
BWXT-Environmental Projects and Operations
Department of Energy
Albuquerque Field Office
P.O. Box 30030
Amarillo, TX 79120-0030

Re: U.S. Environmental Protection Agency (EPA) Approval of the Department of Energy (DOE) *Burning Grounds Human Health Risk Assessment (Revision - September 2006)* for the Pantex Plant: EPA Site ID TX4890110527.

Dear Messrs. Guelker and Huddleston:

The U.S. Environmental Protection Agency (EPA) Region 6 has completed the review of the revised DOE *Burning Grounds Human Health Risk Assessment (September 2006)*, ("BG HHRA"). The BG HHRA has defined six areas of the Burning Grounds and Playa 3 where there is an exceedance of acceptable risk, or hazard target levels, from residual chemical and radionuclide contaminants. Four Contaminants of Concern (COCs), RDX, TNT, barium, and ^{238}U , were identified as the primary risk contributors for these areas and will be further addressed in the Sitewide Corrective Measures Study (CMS)/Feasibility Study (FS). The assessment assumes that the current setting, including the industrial use of the properties, will remain unchanged in the future. EPA agrees with the risk evaluation process used to develop conclusions for this report, and that sufficient information is provided to evaluate remedial options in the CMS/FS to further reduce risk where necessary. The *September 2006* report includes modifications to the draft final *Burning Grounds Human Health Risk Assessment (May 2006)*, and considers previously submitted comments on the original *April 2005* report and the supporting *Subsurface Modeling Report (September 2004)*. DOE's response to comments has been included in the *September 2006* revision.

The BG HHRA risk approach calculated risk levels for 6-acre cells within a grid system, rather than for each of the forty Solid Waste Management Units located at the Burning Grounds. The grid grouped sites with similar exposure scenarios and known contamination. The BG HHRA appropriately pulled forward all Contaminants of Potential Concern (COPCs)

identified in the investigation reports, for both chemicals and radionuclides, for comparison to preliminary screening levels. Those areas, with constituents exceeding screening levels, were then carried through the quantitative risk assessment and characterization, where exposure pathways and the COC risk contributors were identified. Although EPA generally agrees with the risk characterization and conclusions defined in the *BG HHRA*, there are still ongoing discussions to clarify how calibration and boundary restrictions contribute to uncertainties in the Ogallala ground water model. Although it is unlikely that these uncertainties will alter the *BG HHRA* conclusions, approval of the Sitewide HHRA and the Corrective Measures Study (CMS)/Feasibility Study (FS) will be contingent on resolving these questions.

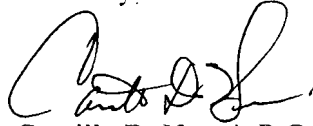
Long-term ground water monitoring will be a necessary part of the final remedy and will also address those uncertainties remaining from the investigation phase. Those constituents identified for long-term monitoring will include, but not be limited to, the COCs determined by *BG HHRA* risk assessment. Details of the monitoring plan, including well locations, will be further defined in the CMS/FS and during the remedial design of the selected remedy. The CMS/FS will also formally recommend No Further Action (NFA) for those Burning Grounds Solid Waste Management Units (SWMUs) where risk is at acceptable levels. Similarly, remedial action will be recommended for SWMUs where contaminants exceed acceptable levels. Final action will also be determined for those areas where Interim Corrective Measures (Section 2.3.1.1) have reduced risk, but contaminants remain in place (i.e. landfills; areas with ongoing soil vapor extraction).

The *BG HHRA* also provided the necessary information to close questions on the Soil Screening Levels (SSLs) derived for the Pantex Plant site-relevant radionuclides and the soil-to-ground water exposure pathway. Attachment 1L: Derivation of SSLs for Radiological SRCs compared several methods used to derive SSLs, including the *EPA Radionuclide Preliminary Remedial Goals (PRGs) for Superfund Electronic Calculator*, but in the final assessment, elected to calculate SSLs with analytical fate and transport model. EPA agrees that this approach was acceptable for the Pantex project, due largely to the thickness of the unsaturated zone. The SSLs derived for the Playa Recharge Scenario will also be appropriate for screening site-relevant radionuclides in the Sitewide Human Risk Assessment.

And finally, the *Burning Grounds Human Health Risk Assessment (September 2006)* was modified to emphasize consistency with the EPA risk assessment policies for radionuclides at CERCLA sites. As with the chemical contaminants, radionuclide contaminant concentrations were compared to established human health screening levels. Radionuclides were included with chemical constituents in the quantitative risk assessment, where screening levels were exceeded. For the Burning Grounds, ²³⁸U was retained as one of the four COCs. Remedial actions for both radionuclide and chemical contaminants will be determined by the risk range for carcinogens established by CERCLA and the National Contingency Plan. Appropriately, dose was not a consideration in calculating the risk levels for the Burnings Ground, nor was dose used to screen COCs.

EPA agrees that the Burning Grounds Human Health Risk Assessment has been completed (with contingencies to address remaining questions on the fate and transport model), and that areas of unacceptable risk have been identified. Those areas will be further addressed in the next CMS/FS phase and final actions recommended. Please let me know if you have any further questions. I can be reached by email at hueni.camille@epa.gov, or at (214) 665-2231.

Sincerely,



Camille D. Hueni, P.G.
Remedial Project Manager
Superfund Division

cc: Ms. Kera Bell, TCEQ
Mr. Jerry Johnson, DOE