

Kathleen Hartnett White, *Chairman*  
R. B. "Ralph" Marquez, *Commissioner*  
Larry R. Soward, *Commissioner*  
Margaret Hoffman, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

August 9, 2004

Mr. Jerry S. Johnson  
Assistant Area Manager  
Department of Energy  
Albuquerque Field Office  
P.O. Box 30030  
Amarillo, Texas 79120

Re: U.S. Department of Energy (DOE), Pantex Plant  
TCEQ Solid Waste Registration No. 30459  
TCEQ Hazardous Waste Permit No. HW-50284  
EPA ID No. TX4890110527  
*Approach to Calculating the Exposure Point Concentration (EPC) for the Human Health Risk Assessment (HHRA) dated April 1, 2004*

Dear Mr. Johnson:

The Texas Commission on Environmental Quality (TCEQ) has conducted a technical review of the above referenced letter which contains the statistical approach to establish the exposure point concentration (EPC) for the human health portion of the Baseline Risk Assessment (BRA). The EPC represents the chemical concentration that a human receptor will likely encounter during an exposure period. Please find attached, the TCEQ's comments on the statistical approach and the concerns regarding the application of the statistical approach.

Questions concerning this letter should be directed to me at (512) 239-2243. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TCEQ Region 1 Office in Amarillo. Please submit responses to this letter within 60 days of the date of this letter or

ADMIN RECORD

AL-PX-SW-004610

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an alternate approved date. The TCEQ Solid Waste Registration Number information should be referenced in all submittals.

Sincerely,

A handwritten signature in black ink, appearing to read "R Musick". The signature is fluid and cursive, with a large initial "R" and a stylized "Musick".

Robert Musick, P.G., Project Manager  
Team I, Corrective Action Section  
Remediation Division  
Texas Commission on Environmental Quality

REM/rm

cc: Mr. Jim McWilliams, Project Manager, TCEQ Region 01 Office - Amarillo  
Ms. Shannon Ethridge, Chief Engineers Office (MC168)  
Ms. Camille Hueni, Superfund Division, Texas Section (6SF-AP), USEPA Region VI

Enclosure: TCEQ Comments

Mr. Jerry S. Johnson  
Enclosure

**Enclosure 1**  
**TCEQ Comments**

## Enclosure 1 - TCEQ Comments

### 1. Statistical Approach

The Human Health Risk Assessment (HHRA) Work Plan defines the statistical approach for establishing the exposure point concentration (EPC) when normal and lognormal distribution occurs in the closure data set, but does not address when parametric estimators are not applicable or when the number of non-detects in the data set exceed 50 percent. The proposed statistical approach identified in the Pantex letter dated April 1, 2004 is appropriate when:

- 1) Sample size is sufficiently large (greater than 20); and,
- 2) Samples have been located with no intent to underestimate the exposure point concentration.

*The TCEQ approves the statistical approach for human health that is proposed by Pantex in the April 1, 2004 letter based on the conditions discussed above regarding sample size and sample locations within the exposure area.*

### 2. Application of the Statistical Approach to Calculate the Exposure Area

The Pantex letter dated April 1, 2004 established the statistical approach to determine the EPC for human health, but did not establish how the statistical approach will be applied to determine the human health EPC for an exposure area and the associated risk. While we approve the statistical approach, the TCEQ is concerned about how the statistical process will be applied to establish risk in an exposure area since the exposure area is set at 12 acres for inactive areas and 6 acres for active areas. It is our understanding that Pantex will be using the geographical information system "Arc View" to select and define exposure areas, which could skew the population of points and impact the EPC calculation.

*The TCEQ is requesting additional clarification regarding the application of the statistical approach within the exposure area, and also regarding how each exposure area will be defined.*