



BILL RICHARDSON
GOVERNOR

CAFBO
State of New Mexico
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Telephone (505) 428-2500
Fax (505) 428-2567
www.nmenv.state.nm.us



RON CURRY
SECRETARY

DERRITH WATCHMAN-MOORE
DEPUTY SECRETARY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 16, 2006

Colonel John D. Posner
Commander 27th Fighter Wing
100 D.L. Ingram Boulevard
Cannon Air Force Base, New Mexico 88103-5214

SUBJECT: NOTICE OF DEFICIENCY
NATURALLY OCCURRING CONCENTRATIONS OF INORGANICS AND
BACKGROUND CONCENTRATIONS OF PESTICIDES AT CANNON
AIR FORCE BASE, NEW MEXICO
EPA ID NO. NM7572124454
CAFBO-06-001

Dear Colonel Posner:

The New Mexico Environment Department (NMED) has reviewed the Cannon Air Force Base's (CAFB) September 1997 document: *Naturally Occurring Concentrations of Inorganics and Background Concentrations of Pesticides at Cannon Air Force Base, New Mexico* (Report), which was resubmitted on August 23, 2005. NMED has determined that CAFB Report is technically deficient. While NMED does not require resubmission of the entire Report, CAFB must address the comments provided in this letter within 60 days of its receipt.

Comment 1

One of the purposes of the Report is to determine the natural background level for pesticides. However, pesticides do not occur naturally in the environment. It is typically assumed that detections of pesticides are due to site activities. It is not clear in the Report whether the history

Colonel John D. Posner
March 16, 2006
Page 2

of farming and agriculture activities in the area has led to elevated levels of pesticides in general. Low-levels of pesticides may also be indicative of industrial or residential use, or both. Given that only one pesticide (4,4-DDT) was detected in one surface soil sample, it appears that establishment of a background pesticide level for 4,4-DDT is not appropriate and that adequate demonstration of 4,4-DDT as an area-wide contaminant has not been provided. NMED does not recommend that background levels for pesticides be established.

Comment 2

The Report did not clearly describe how field replicates were handled for the background soil samples. Typically for field duplicates, if both of the sample results are detected values, the primary and duplicate sample results are averaged. If one sample result was a detected value, and the other was a non-detect, the detected value is averaged with one-half the sample quantitation limit (SQL) of the non-detect. Further, if both samples were non-detect values, one-half the results with the lowest SQL is used as a surrogate value. CAFB must clarify how field replicates were addressed.

Comment 3

Report's presentation of estimations of Upper Tolerance Limits (UTLs), Upper Confidence Limits (UCLs), and maximum detected concentrations is confusing in that it does not clearly identify what will be used to represent background. Typically, the maximum detected site concentration is compared to a representative UTL for background. It is not clear what purpose the background UCL will serve. CAFB must clarify what values will be used to represent background concentrations and how a comparison to background will be performed.

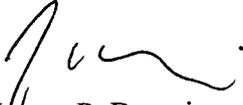
Comment 4

The Report estimates background concentrations (UTLs and UCLs) for metals detected in surface and subsurface soil. However, based upon the discussion of the geology at the site, there may be more than one soil type present. When evaluating background, a background data set for both surface and subsurface soil is acceptable. However, if the site concentrations exceed the site-wide background concentration, the exceedance is often due to differences in soil type. In these cases, background based upon soil type is often determined. CAFB must discuss whether any background concentrations based upon soil type were determined. This may be of particular concern, for example, if an area predominantly of caliche (Clovis soils) or sand (Amarillo soil) is under investigation. Also discuss how different soil types are accounted for in determining background.

Colonel John D. Posner
March 16, 2006
Page 3

If you have any questions regarding this letter, please call Swarna Vonteddu at (505) 428-2551.

Sincerely,



James P. Bearzi
Chief
Hazardous Waste Bureau

JPB:sv

cc: *J. Kieling, NMED HWB
*Dave Cobrain, NMED HWB
C. Frischkorn, NMED HWB
Swarna Vonteddu, NMED HWB
L. King, EPA Region 6 (6PD-N)
Peter Zamie, CAFB

File: Reading File & CAFB 2006 File

*Electronic copy