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June 23, 1995

Christopher S. Long, Colonel, USAF  
Commander, 27th Support Group  
100 S DL Ingram Blvd Suite 200  
Cannon AFB NM 88103-5217

Dear Colonel Long:

The New Mexico Environment Department (NMED) Hazardous and Radioactive Materials Bureau (HRMB) has reviewed a draft Cannon Air Force Base (CAFB) Melrose Air Force Range (MAFR) Phase I RCRA Facility Investigation (RFI) Work Plan, dated April 1995. We offer the following general and site specific comments.

**General Comments**

NMED believes that the final work plan for this investigation should be more specific in the following ways:

1. Additional criteria to be used to fully delineate the extent of contaminant migration should be outlined in this work plan, perhaps in the data quality objectives (DQO) section. At this early stage of the investigation, these should be general criteria applicable to all Solid Waste Management Units (SWMUs) and Areas of concern (AOCs). The possibility of additional phases of investigation are proposed in this work plan, but CAFB does not identify what would trigger these additional phases.

For your information, NMED considers contaminant delineation complete, as required by an RFI, when contamination has been measured to "action levels" in all directions from a release point. However, should a risk analysis determine that the action level concentrations at the boundary of the investigation represent an unacceptable risk, delineation must continue until concentrations are diminished to an acceptable level. Subpart S action levels stipulated in 55FR30798 (1990) are dated and may not be determined with the most currently accepted toxicological/epidemiological information used to calculate reference doses or carcinogenic slope factors. The NMED prefers the more current "Risk Based Concentration (RBC) Table", which is guidance published by the EPA Region III. This table may be obtained by telephoning (215) 597-3179.

2. Additional criteria to be used to position soil borings should be outlined in this work plan. The work plan suggests that soil boring locations will be based on geophysical survey information and "other appropriate site information". Please define "other appropriate site information". Will the results of the passive soil vapor survey influence the positioning of the boring locations?

CAFB is also proposing to locate the projected groundwater monitoring wells in the same boreholes used to collect subsurface soil samples. NMED believes that the reasons for positioning monitor wells, such as determining groundwater gradients, differ significantly from the reasons for positioning soil sample locations, such as examining potential "hot spots". NMED is concerned that an insufficient number of boreholes and improper borehole placement might inadvertently miss subsurface contamination. Please elaborate on the appropriateness of co-locating soil sampling locations and monitor wells.

NMED recognizes the inherent dangers of sampling within land treatment units containing explosive materials, but requires that the units be properly characterized. Therefore, CAFB should explore the possibilities for sampling for a contaminant release directly below these units, perhaps using angle drilling techniques.

3. CAFB should further justify its proposal to discrete sample a limited number of subsurface soil intervals for chemical and physical analysis. The work plan proposes to collect two, two foot samples in the upper ten feet and then a two foot sample every ten feet to total depth in a very limited number of bore holes. NMED believes that the proposed sample intervals are insufficient to both identify a possible contaminant release and to characterize subsurface lithology. NMED requests that CAFB continuously sample subsurface soils in a minimum of one bore hole at each investigative unit. Preferably, continuous sampling would occur in more than one borehole at at least one unit to establish the potential for lateral variability of area sediments. Additionally, NMED requests that these soil samples be retained in core boxes so that NMED personnel may inspect them at a later date.

4. The criteria to be used to establish the "target" locations for surface sampling should be better defined. NMED requires CAFB address obvious surface staining, obvious contaminant collection points such as low spots, etc.

5. The criteria to be used to establish "background" soil sampling locations should be better defined. Considering the nature of a bombing range and its potential to have pervasive surface contamination, CAFB should outline in the work plan how it plans to collect an uncontaminated background sample.

6. Please further justify the CAFB proposal to collect groundwater

samples via "hydropunch" technology instead of installing monitoring wells at units near bombing targets. NMED is concerned about the non-reproductability and non-representative nature of this type of sampling technique. NMED understands that the military generally establishes a "weapons safety footprint" to determine the likelihood of weapon impacts away from the target area. Does a safety footprint exist for Melrose Bombing Range and could its location in relation to the investigative units be provided to justify not creating monitor wells?

7. Please further justify not performing a soil gas survey at the following units: SWMU 117, NW Munitions Disposal Site, Helicopter Pad Disposal/Burn Site, and the Domestic Waste Burial Site. Presumably these sites have the same potential to contain volatile organic compounds (VOCs) as those sites where the survey is proposed to occur.

Again, NMED recognizes the inherent dangers of sampling and ultimately excavating land treatment units containing explosive materials. For your information, in situations where wastes are to be left in place in a land treatment unit, particularly when groundwater is relatively deep and difficult to remediate, the Department generally requires long term vadose zone monitoring in addition to groundwater monitoring. This work plan might take these possible requirements into consideration, perhaps proposing the installation of lysimeters or soil vapor monitoring probes into investigative boreholes.

#### **Site Specific Comments**

SWMU 114 (Exploded Ordnance and Industrial Waste Burial Site)

The Field Sampling Plan (FSP) and the Standard Operating Procedures (SOPs) are inconsistent regarding which analytical method will be used for the soil gas samples. Please explain the difference between EPA methods 8240 and 8260. If method 8260 simply has lower detection limits, NMED would prefer that method be used.

SWMU 115 (Explosives-contaminated Burial Site)

NMED suggests sampling the sediments in the reservoir below this unit, regardless of the presence of surface water in the connecting arroyo. Sampling should occur where highest contaminant concentrations are expected or at the lowest point in the reservoir where fluids would pool and concentrate.

SWMU 117 (Domestic Waste Burial Site)

Please provide all evidence of unexploded ordnance (UXO) disposal at this site. Claiming UXO disposal at a site severely limits the investigative possibilities and reduces the probability of

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detecting a contaminant release.

WW II Cantonment Disposal Site

Please discuss in more detail how CAFB proposes to locate this waste site(s). Please explain how was this site was identified in the first place?

If you have any questions or comments, please call me at (505) 827-4308.

Sincerely,



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