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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 25, 2012

Colonel David C. Piech
27th Special Operations Mission Support Group
110 E. Sextant Avenue, Building 600, Suite 1098
Cannon Air Force Base, New Mexico 88103

**RE: APPROVAL WITH MODIFICATIONS
PHASE II SUPPLEMENTAL ASSESSMENT AT AREA OF CONCERN A (SS-19)
CANNON AIR FORCE BASE, NEW MEXICO
EPA ID # NM7572124454
HWB-CAFB-12-001**

Dear Col. Piech:

The New Mexico Environment Department (NMED) has completed a review Cannon Air Force Base's (Permittee) *Phase II Supplemental Assessment at Area of Concern A (SS-19)* (Report) dated February 22, 2012. NMED hereby issues this approval with modifications with the following comments.

Table 3-2 (Summary of Analytical Data Screening Results, Phase II Supplemental Assessment at AOC A (SS-19), Cannon Air Force Base, New Mexico) indicates that results exceed Los Alamos National Laboratory Ecological Screening Levels (LANL ESL)'s. In **Section 3.3 Screening Results, bottom of page 3-1, top of page 3-2** the Permittee states "[t]he maximum lead concentration (1.2E+02 mg/kg) is below the NMED residential screening level for lead (4.00E+02 mg/kg)...[f]ive of the six surface soil samples from AOC A were above LANL ESL's...[t]he following LANL ESLs were exceeded: American robin...and Montane shrew..." In **Section 3.4.1 Qualitative Assessment Checklists, pages 3-2 through 3-5** the Permittee describes how NMED's Scoping Site Assessment Checklist and Ecological Site Exclusion Checklist were used to assist in the qualitative assessment phase to determine that further ecological assessment or risk screening were warranted for Area of Concern (AOC) A

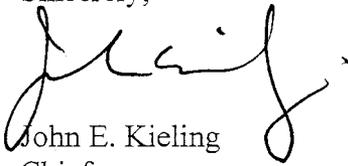
Colonel David C. Piech
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(SS-19).

Since the initial screening resulted in slightly elevated hazard quotients (HQ)s, NMED conducted a refined ERA (see Attachment 1). The results of the refined ecological risk assessment (ERA) determined that the calculated ecological HQs would be well below target levels for both individual American robin and Montane shrew receptors and populations based on a more refined assessment, indicating that lead in soil at AOC A (SS-19) would not likely pose ecological risk. Therefore, the conclusion of the baseline ERA presented in the *Phase II Supplemental Assessment at Area of Concern (AOC) A*, as clarified with this assessment, is adequate and would meet NMED requirements for approval.

No response to this letter is necessary. If you have any questions regarding this letter, please call Dave Cobrain of my staff at (505) 476-6055.

Sincerely,



John E. Kieling
Chief
Hazardous Waste Bureau

Attachment 1: New Mexico Environment Department's Refined Ecological Risk Assessment for
AOC A (SS-19), Cannon Air Force Base, New Mexico

cc: D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
L. Andress, NMED HWB
M. Higginbotham, CAFB
R. Lancaster, CAFB

File: CAFB 2012 and Reading
CAFB-12-001

New Mexico Environment Department's Refined Ecological Risk Assessment for AOC A (SS-19), Cannon Air Force Base, New Mexico

The baseline (ecological risk assessment (ERA) presented in Cannon Air Force Base (CAFB)'s *Phase II Supplemental Assessment at AOC A (SS-19)*, dated February 2012 concluded that the site would provide little or no suitable foraging habitat since the site is industrially developed: 67% of the site is covered in roads/parking lots/buildings, and the remaining 33% consists of regularly maintained lawns. Therefore, further ecological evaluation was not conducted at AOC A. Because detected concentrations of lead in four of the additional soil samples slightly exceeded Los Alamos National Laboratory's (LANL's) Ecological Screening Levels (ESLs) for the American robin and the Montane shrew the New Mexico Environment Department (NMED) conducted a refined ecological risk assessment (ERA) for Area of Concern (AOC) A.

While the site may potentially provide some foraging habitat for ecological receptors, it is agreed that it would not be significant due to the limited area (possibility of 33% of the site) and the relatively small size of the site. The assessment provided by CAFB was limited to an initial screening (Tier 1) based on conservative toxicity data No-Observed Adverse Effect Levels (NOAELs). Because the initial screening did result in slightly elevated hazard quotients (HQs), further quantitative ecological evaluation should have been conducted for the American robin and Montane shrew receptors using an application of lowest observed adverse effect levels (LOAELs) and area use and population area use factors.

NMED assumed that the average home ranges consist of 1.1 acres for the American Robin and 0.96 acres for the Montane shrew. In addition, NMED assumed that only 33% of the acreage at the site was suitable for habitat. Using modifications of the area use factors and population use factors along with LOAEL-based LANL ESLs, more refined HQs were calculated as shown in the below tables.

Table 1 - Refined HQ for American Robin, Insectivore.

Constituent	Maximum (mg/kg)	LOAEL-based ESL American Robin (Avian Insectivore) (mg/kg)	AUF	PAUF	Adjusted Individual HQ	Adjusted Population HQ
Lead	1.12E+02	2.80E+01	1.80E-01	4.50E-03	7.20E-01	1.80E-02

ESL = LANL ecological screening level based on LOAEL.

AUF (area use factor) = exposure area/home range. Exposure area is 33% of site area (0.6 acre) = 0.2 acre. Average home range for American robin is 1.1 acre (USEPA, 1993).

PAUF (population area use factor) = exposure area/population area. Exposure area is 33% of 0.6 acre = 0.2 acre. Population area for American robin is 44 acres (USEPA, 1993).

Table 2 - Refined HQ for American Robin, Omnivore.

Constituent	Maximum (mg/kg)	LOAEL-based ESL American Robin (Avian Omnivore) (mg/kg)	AUF	PAUF	Adjusted Individual HQ	Adjusted Population HQ
Lead	1.12E+02	3.30E+01	1.80E-01	4.50E-03	6.11E-01	1.53E-02

ESL = LANL ecological screening level based on LOAEL.

AUF = exposure area/home range. Exposure area is 33% of site area (0.6 acre) = 0.2 acre. Average home range for American robin is 1.1 acre (USEPA, 1993).

PAUF = exposure area/population area. Exposure area is 33% of site area (0.6 acre) = 0.2 acre. Population area for American robin is 44 acres (USEPA, 1993).

Table 3 - Refined HQ for American Robin, Herbivore.

Constituent	Maximum (mg/kg)	LOAEL-based ESL American Robin (Avian Herbivore) (mg/kg)	AUF	PAUF	Adjusted Individual HQ	Adjusted Population HQ
Lead	1.12E+02	4.20E+01	1.80E-01	4.50E-03	4.80E-01	1.20E-02

ESL = LANL ecological screening level based on LOAEL.

AUF = exposure area/home range. Exposure area is 33% of site area (0.6 acre) = 0.2 acre. Average home range for American robin is 1.1 acre (USEPA, 1993).

PAUF = exposure area/population area. Exposure area is 33% of site area (0.6 acre) = 0.2 acre. Population area for American robin is 44 acres (USEPA, 1993).

Table 4 - Refined HQ for Montane Shrew.

Constituent	Maximum (mg/kg)	LOAEL-based ESL Montane Shrew (mg/kg)	AUF	PAUF	Adjusted Individual HQ	Adjusted Population HQ
Lead	1.12E+02	1.30E+02	2.08E-01	5.00E-03	1.79E-01	4.31E-03

ESL = LANL ecological screening level based on LOAEL.

AUF = exposure area/home range. Exposure area is 33% of site area (0.6 acre) = 0.2 acre. Average home range for Montane shrew is 0.96 acre (USEPA, 1993).

PAUF = exposure area/population area. Exposure area is 33% of site area (0.6 acre) = 0.2 acre. Population area for Montane shrew is 39 acres (USEPA, 1993).

Reference: US EPA, 1993. *Wildlife Exposure Factors Handbook*. EPA/600/R-93/187. December.

The calculated ecological HQs would be well below target levels for both individual American robin and Montane shrew receptors and populations based on a more refined assessment, indicating that lead in soil at AOC A would not likely pose ecological risk. Therefore, the conclusion of the baseline ERA presented in the *Phase II Supplemental Assessment at Area of Concern (AOC) A*, as clarified with this assessment, is adequate and would meet NMED requirements for approval.