



NEW MEXICO
ENVIRONMENT DEPARTMENT



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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 7, 2009

Keith Landreth
Attn: ATZC-DOE (Landreth)
Bldg. 624
1733 Pleasanton Rd.
Fort Bliss, Texas 79916-6812

**RE: APPROVAL WITH MODIFICATIONS FOR FINAL RCRA FACILITY
INVESTIGATION REPORT INACTIVE MCGREGOR RANGE
OPEN DETONATION AREA
FORT BLISS, NEW MEXICO, EPA ID# NM 4213720101
HWB-FB-09-001**

Dear Mr. Landreth:

The New Mexico Environment Department (NMED) has received the United States Department of the Army/Fort Bliss's (Permittee's) *Final RCRA Facility Investigation Report, Inactive McGregor Range Open Detonation Area, Fort Bliss New Mexico*, (Report) dated December 2008. NMED hereby issues this Approval with Modifications for the Report. While there were several issues noted with the Report as discussed below, none of the issues or concerns are deemed significant enough to warrant revisions to the Report.

General Comments:

1. An overriding concern with unrestricted release of Solid Waste Management Unit (SWMU) 20 is the possibility of materials potentially posing an explosive hazard (MPPEH) being unearthed over time through the natural weathering/erosion processes. While soil meets residential risk levels, it is suggested that land use controls be placed on the site requiring periodic inspections of the site to look for and remove exposed MPPEH.

2. There is a concern that dioxin/furans were only analyzed during the Phase I Investigations. However, given that metals and polychlorinated biphenyls (PCBs) were detected at relatively low concentrations and it is expected that the magnitude of dioxin/furan concentrations would mimic those for metals and PCBs; therefore, additional sampling for dioxins/furans is not required at this time.
3. The site investigation was conducted over four phases, resulting in several different evaluations of data and screening levels. Rather than compare each set of data to the screening levels current at the time of the initial evaluation, data were compared to the current NMED Soil Screening Levels (SSLs). NMED issued a revised Version 5.0 for SSLs in August 2009. All of the reported contaminant concentrations are below present day soil screening levels.
4. The ecological screening levels (ESLs) applied in the risk assessment are based on 2003 data. A review of current toxicity reference values was conducted and SWMU 20 data were compared to more updated ESLs. No changes in the conclusion of the risk assessment resulted from use of the more recent SSLs. Several constituents were eliminated from the ecological risk assessment based on frequency of detection. Given the site history, there is reasonable evidence to suggest that these constituents could have been present due to site activities and as such, should have been retained for evaluation in the risk assessment. However, the omitted results were compared to screening levels, and the detections are insignificant in comparison to the ecological screening data.
5. The overall conclusion of the ecological risk assessment is that resulting risks for all three receptors were below the target hazard level. This conclusion is not supported by the data. In reviewing the screening level ecological risk assessment provided in Appendix 3 (Table 6.2), barium was a driver for the white-footed mouse and the resulting hazard quotient (HQ) for barium was slightly greater than the target level of one (1.44). In reviewing comments previously generated on the *Site-Specific Background Values McGregor Range Camp Area*, Fort Bliss, New Mexico (October 2008), there was some concern noted with the data for barium in soil horizon A. The background data appeared to be much lower than anticipated and it was suggested that the facility review the quality assurance report from the laboratory to ensure data integrity. Since the detected barium concentrations are not significantly high, are less than corresponding human health risk levels, and the resulting HQ only slightly exceeds the target level, there does not appear to be a concern that potential exposure to the levels of barium in soil would result in undue ecological risk.

Specific Comments:

1. **Section 4.2.4, Phase I RFI Results, page 4-6;** Total petroleum hydrocarbon (TPH) concentrations were between 11 and 47.9 milligrams per kilogram (mg/kg). The Report indicated that an evaluation of these levels could not be conducted because a screening level is not provided in the New Mexico Environment Department's (NMED) Soil Screening Guidance (2006). For this review, the TPH levels were compared by NMED against the screening criteria provided in the *New Mexico Environment Department TPH*

Screening Guidelines (October 2006). The reported TPH levels were all less than TPH screening levels.

2. **Table 4-1, Phase 1 RFI Laboratory Analytical Results:** Sample SS20-1-03 is described as a duplicate sample of SS20-1. The Table indicates that these two samples were collected from different depths (i.e., from 0-2 ft and 2-3 ft). Discreet samples collected from different depths are not considered duplicates. A similar discrepancy was noted for sample SS20-3-03 which is described as duplicate of SS20-3. Review of the data indicates that it does not change the conclusions for SWMU 20.
3. **Table 4-1 and 4-3, Phase 1 and 3 RFI Laboratory Analytical Results:** Chromium data were evaluated against screening levels for trivalent chromium. To be conservative, if laboratory data are not available to indicate the speciation of chromium (tri- or hexavalent chromium, or total chromium), screening data for hexavalent chromium should be applied. This comment is applicable to both human health and ecological screening evaluations. It was noted that when reporting results of the Phase 4 RFI investigation, appropriate screening levels for chromium were used. NMED compared data to current screening levels for total chromium and hexavalent chromium, and site concentrations were both less than the corresponding screening levels. No revision to the Report is required.
4. **Table 5-1, Phase 4 RFI Laboratory Analytical Results:** The newly revised SSLs for elemental mercury are 7.71 mg/kg and 49.9 mg/kg for residential and industrial use, respectively, instead of 100,000 mg/kg used in the table 5-1 for both land uses. Review of the data indicates that application of a SSL based on revised values would not alter the conclusions of the risk assessments.
5. **Appendix 3, Screening Level Ecological Risk Assessment:** A soil interval of zero to two feet below ground surface (ft bgs) was applied for the exposure interval for the ecological risk assessment. This interval is considered appropriate for the evaluation of soil contaminant exposures for surface-foraging and shallow-burrowing wildlife (finch and white-footed mouse). However, the gray fox is known to burrow and have den chambers up to ten ft bgs. For the fox, a soil interval of zero to ten ft bgs is more appropriate. SWMU 20 has been used primarily for testing and open detonation activities, and inorganics, which are relatively immobile in soil, are the primary constituents of potential ecological concern. Significant soil contamination at depth is most likely minimal; therefore, evaluation of exposures to the gray fox from soils up to ten ft bgs would not likely change the results of the risk assessment. However, in the future reports, the Permittee must use a soil interval of zero to ten ft bgs for the gray fox.

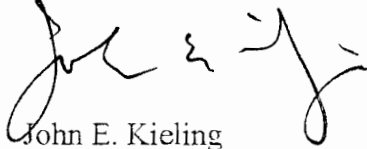
Modification: As noted in General Comment # 1, NMED is concerned with unrestricted use of the site because of a concern for public safety. NMED will not agree to unrestricted land use because removal of 100% of MPPEH is not guaranteed. The Permittee must conduct biennial visual surveys of the SWMU 20 and remove any exposed MPPEH. The Permittee must implement institutional controls at the site including posting warning signs and must restrict the access to the land.

Keith Landreth
October 7, 2009
Page 4

Following each biennial inspection and/or removal of MPPEH, the Permittee must submit a report documenting the results of the visual survey. The report must include a map depicting the area inspected and the location(s) of any identified MPPEH removed during the inspection. All such reports must be submitted by December 31st of the inspection year. The first report must be submitted by December 31, 2010.

If you have any questions, please contact Neelam Dhawan of my staff at (505) 476-6042.

Sincerely,



John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
R. Baca, Ft. Bliss

File: Reading File and FB 2009, Final RFI Report for McGregor Range OD Area,
SWMU 20
FB-09-001