



DEPARTMENT OF THE AIR FORCE
27TH CIVIL ENGINEER SQUADRON (ACC)
CANNON AIR FORCE BASE NEW MEXICO

17 DEC 1999

Lt Colonel Eric J. Wilbur
Commander
506 N DL Ingram Blvd
Cannon AFB NM 88103-5136



(K)



Mr. James Bearzi, Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo Street
P O Box 261110
Santa Fe NM 87502

Dear Mr. Bearzi

Enclosed for your review and approval is the *Revised Response to the New Mexico Environment Department Comments, Corrective Measures Study Work Plan, Solid Waste Management Units 86-90 (site SD-11)*. Comments issued in your 25 Feb 99 letter, *Request for Supplemental Information*, were previously answered in Apr 99. Further comment was subsequently issued verbally by your staff to which these revised responses are offered.

If you have any questions, please contact Mr. Sanford Hutsell at (505) 784-6378 or Mr. John Pike at (505) 784-1092 of my environmental flight.

Sincerely

ERIC J. WILBUR, Lt Col, USAF

Attachment:

Revised Response to Request for Supplemental Information

cc:

NMED (G. VonGotten)
EPA Region VI (B. Sturdivant)

**REVISED RESPONSE TO NMED COMMENTS
CORRECTIVE MEASURES STUDY WORK PLAN
SWMUs 86-90 (SITE SD-11)
CANNON AFB, NEW MEXICO**

Comments dated February 25, 1999

General Comments

Comment 1. By letter from Stu Dinwiddie to Colonel Koerner, dated September 19, 1997, HRMB required that a CMS be completed for this site. Address all comments in the letter in the CMS Report when the Report is submitted.

Response: Comments in the letter will be addressed in the CMS Report.

Section One, Introduction

Comment 2. Figure 1-3, Estimated Schedule. According to the schedule submitted with the Workplan, the final Workplan was to be issued on August 20, 1998, and field work was to be completed by October 7, 1998. HRMB did not receive the Workplan until October 20, 1998, which did not allow time for review of the Workplan prior to completion of the field work.

Response: The schedule for fieldwork was revised and actually completed in December 1998. A revised schedule has been provided for the Work Plan.

Section Three, Site Background

Comment 3. Include a map showing the location of production well No. 9.

Response: Production Well No. 9 is shown on Figure 3-1.

Comment 4. Page 3-3. In the discussion of the 1991 RI, include the levels of TPH detected.

Response: TPH was not analyzed for during the 1991 RI.

Section Four, CMS Objectives and Approach

Comment 5. 4.2 Corrective Measures Study Approach. a. In the September 19, 1997 letter, HRMB stated that the CMS should address the delineation of horizontal extent of contamination at the site, which had not been done in prior investigations, and determine the means for reducing the levels of TPH contamination to 1000 mg/kg. It is not clear how this Workplan addresses those issues.

Response: In order to address the concerns issued by NMED regarding delineation of contamination in the horizontal direction, an additional boring west of the boring 8612 will be made. This additional boring will complete delineation in all directions for the

suspected area of contamination. Boring location and depth will be predetermined through discussion with NMED representatives.

The Work Plan does not specifically discuss means for reducing TPH contamination to 1,000 mg/kg because alternative(s) were to be selected following the RBCA process evaluation performed in the CMS report. Preselecting TPH levels at 1,000 mg/kg is not a risk-based selection process (see further discussion on comment c. below).

b. The proposed boring locations will not delineate horizontal extent of contamination. TPH was detected at boring 8612, the most westerly boring location at the site, at 5390 mg/kg. Additional borings may be required west of boring location 8612 in order to determine the extent of horizontal contamination, or there must be a risk-based determination that the levels detected are acceptable to remain in place.

Response: As mentioned in response (a) above, an additional boring west of boring location 8612 will be made in order to determine the westerly extent of contamination at the site.

c. There is no discussion in the Workplan of how to address the levels of TPH contamination detected. In order to address whether or not removal of soil contaminated with TPH above 1000 mg/kg is required, the risk assessment process described in the Workplan must incorporate sampling results from prior investigations, including the TPH detected, as well as the results from this current investigation.

Response: Since TPH is a complex chemical mixture, no toxicity value has been established for it. Therefore, no Tier 1 (MSSLs) value can be calculated for TPH. However, the soil samples were also analyzed for VOCs, SVOCs, and PAHs. These compounds are known to contain constituents of TPH. It is these compounds that will be used to determine whether or not TPH concentrations above 1,000 mg/kg need to be removed.

The CMS report will include Phase II RFI and the latest CMS data. Soil data prior to the Phase II RFI will not be included because the soil has been removed and properly disposed of through excavations.

d. **Page 4-2.** The Workplan states that if concentrations of COPC's are at levels that could migrate to groundwater, based on EPA Region VI Media-Specific Screening Levels (MSSL's), then fate and transport modeling will be done. HRMB is not aware of MSSL's for TPH. Without using MSSLs, how will CAFB determine if TPH levels are a threat to groundwater and if transport modeling is required?

Response: If any individual constituents are detected at concentrations which exceed their MSSLs, the constituents will be modeled to determine whether or not groundwater will be impacted. As discussed above, the individual constituents are being used to assess potential risks from TPH.

e. **Page 4-2.** The Workplan states that once the extent of contamination has been defined, then corrective measure alternatives will be evaluated. Remediation goals must be determined before corrective measure alternatives can be evaluated.

Response: The RBCA process is being used to determine the remediation goals for site SD-11. The RBCA process includes calculations of Site-Specific Target Levels (SSTLs), if warranted. SSTLs are levels of contamination which are considered safe using generally conservative assumptions. Therefore, concentrations left in place below these SSTLs require no further action.

Comment 6. 4.6.2. Derivation of EPA Region VI MSSLs. a. MSSLs for direct exposure to soil are not sufficient to be used alone as screening levels. Levels of soil contamination below MSSLs can be unacceptable if there is a threat of transport to groundwater resulting in groundwater contamination above cleanup standards. How will CAFB address this issue for TPH levels at the site?

Response: Groundwater is unlikely to be impacted by site SD-11 for several reasons. First, depth to groundwater is 280 feet bgs. There is no surficial aquifer below Cannon AFB. Second, groundwater is approximately 200 feet below the depth of URSGWC's deepest borings which resulted in non-detect. Third, climatic conditions, in the form of evapo-transpiration rates, for the region do not provide a viable means of transport for contaminants to groundwater. Therefore, concentrations below residential MSSLs are unlikely to impact groundwater beneath Cannon AFB. Any detected concentrations which exceed the Tier 1 MSSLs will be modeled to determine if groundwater is at risk. As discussed in Comment 5c., TPH will be evaluated using detected concentrations of VOCs, SVOCs, and PAHs.

b. Page 4-9, line 4. Replace "screening level MSSLs are not expected" with "screening level MSSLs are not exceeded."

Response: The word "expected" will be changed to "exceeded."

c. The section on MSSLs for lead in soil states that the EPA Region VI industrial soil MSSL for lead is 2,000 mg/kg. As of August, 1998, this value is listed in the EPA Region VI Human Health Medium-Specific Screening Levels as 1,000 mg/kg.

Response: The MSSLs updated on October 8, 1998 and printed February 1, 1999, show the industrial soil MSSL for lead to be 2,000 mg/kg. Therefore, 2,000 mg/kg will be used as the Tier 2 concentration for the CMS.

Field Sampling Plan

Comment 7. Page 1-1, paragraph 1, line 2. Change "1-1" to 1-2."

Response: The change will be made in the CMS report.

Comment 8. Page 1-1, paragraph 4, line 4. Insert after "collected from" "each of the."

Response: The change will be made in the CMS report.

Comment 9. Page 1-2. Specify whether the low or mid-level detection limit is used to trigger USACE Technical Manager notification.

Response: As stated on page 1-2 of the field sampling plan, any detection of TPH would have resulted in the notification of the USACE Technical Manager.

Comment 10. Page 1-2. VOC's will be analyzed by EPA Method 8260B. Be advised of Update III to SW-846 sample collection technique published in the June 13, 1997 Federal Register Vol. 62, No. 114, pp. 32452-463. The accuracy of this method warrant their immediate use versus traditional methods. The three alternatives are: Method 5021, heated head space for volatile concentrations below 200 ppb; Method 5035, heated purge and trap in the range of 5 to 200 ppb; and Method 5035, methanol extract for volatiles exceeding 200 ppb.

Response: During the planning stages of the Work Plan, the collection of samples following SW-846 Method 5035 was considered. Since all historical VOC data at the site was collected using 4 oz. jars, it was determined that samples should continue to be collected using 4 oz. jars to maintain consistency throughout the project. In order to meet criteria specified under the June 13, 1997 Federal Register for SW-846 Sample Collection Techniques, the additional boring planned for determining the westerly extent of contamination will adhere to the revised methods. All future samples taken for future investigations will also follow the latest sample collection techniques.

Comment 11. Figure 1. What criteria were used to determine the proposed soil boring locations inside the concrete berm? Results of the previous soil boring locations are not discussed, and borings 11A and B1 are not shown. Borings B2, B3, B4, and B5 are shown as completed nine years ago as part of Phase IV IRP. Consider sampling outside of the berm to confirm existing conditions.

Response: Results of the previous investigations are discussed in the CMS Work Plan, Section 3.3, Previous Investigations. Figure 3-2 in this work plan shows the locations of borings 11A and B1, which are southwest and west of the evaporation pond (and outside the scale of Figure 1 in the Field Sampling Plan). Results from previous investigations indicated contamination ranging from nondetect to low levels in borings 30 to 60 feet bgs. Sampling inside the berm was selected because: (1) previous borings on the outside were generally "clean," and (2) the highest levels of contamination, if any, would most likely be directly below the source area.

Comment 12. Appendix B. EPA Region 6 Human Health Media-Specific Screening Levels. Note that this document (11/7/97) is now out of date. The current document is October 1998 and can be found on the Internet at <http://www.epa.gov/earthlr6/6pd/rcra-c/pd-n/r6scrval.htm>.

Response: As indicated in the CMS Work Plan, Section 4.6.2, Derivation of EPA Region VI MSSSLs, the latest version will be used. Appendix B was the current version when preparation of the Work Plan was initiated.