



**BILL RICHARDSON**  
GOVERNOR

*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**

July 27, 2005

Ms. Debbie Hartell  
Chief  
Environmental Flight  
49 CES/CEV  
550 Tabosa Ave.  
Holloman AFB, NM 88330-8458

**SUBJECT: REQUEST FOR SUPPLEMENTAL INFORMATION: SWMU-127 (FT-31):  
VOLUNTARY CORRECTIVE MEASURES COMPLETION REPORT,  
FEBRUARY 2005  
HOLLOMAN AIR FORCE BASE  
EPA ID# NM6572124422  
HWB-HAFB-05-002**

Dear Ms. Hartell:

The New Mexico Environment Department (NMED) Hazardous Waste Bureau (HWB) has reviewed the subject document for technical completeness. Based on that review, NMED has determined that the Fire Training Area (FT-31) listed in HAFB's Subtitle C Permit as SWMU-127, does not appear appropriate for a No Further Action (NFA) determination at this time. FT-31 comprises Solid Waste Management Units 39, 127, 135 and 170, and the JP-4 Fuel Tank Area. Enclosed is a list of comments, which Holloman Air Force Base (HAFB) must address. Please respond to this Request for Supplemental Information (RSI) within sixty (60) calendar days of the date of this letter. Failure to respond within this time period may result in the issuance of a Notice of Deficiency. NMED may consider a petition for an extension of the deadline for submittal of the additional information, provided that written justification and the expected submittal date are provided by HAFB.

Ms. Debbie Hartell  
July 27, 2005  
Page 2 of 10

If you have any questions regarding this matter or if you would like to discuss the comments prior to your response, please contact David Strasser at (505) 222-9526.

Sincerely,



Cornelius Amindyas  
HAFB Project Leader  
Permits Management Program

CA/ds

cc: James Bearzi, Chief, NMED, HWB  
William Moats, NMED, HWB  
David Strasser, NMED, HWB  
Debra Tellez, EPA, Region 6 (6PD-F)  
Dan Holmquist, HAFB  
File: Reading and HAFB-HSWA

**ATTACHMENT  
REQUEST FOR SUPPLEMENTAL INFORMATION:  
SWMU-127 (FT-31) VOLUNTARY CORRECTIVE MEASURES  
COMPLETION REPORT, FEBRUARY 2005  
HOLLOMAN AIR FORCE BASE (HAFB)  
EPA ID# NM6572124422**

**TASK # HWB-HAFB-05-002**

**NMED Requirements for Voluntary Corrective Measures Reports**

For purposes of determining whether or not a Solid Waste Management Unit (SWMU) is suitable for a No Further Action (NFA) determination, site characterization and site cleanup must be adequate, and the document proposing the site for NFA must be complete and of high quality.

The Voluntary Corrective Measures (VCM) Report reviewed in this document does not meet NMED document quality requirements. It is NMED policy that everything needed to support a decision for NFA must be included in any document that proposes NFA for a SWMU.

The following are NMED's comments and concerns on HAFB's RFI Report for FT-31, dated February 2005. The quotations in **bold print** are taken directly from the subject document. Please address the comments and submit the additional information as directed in the cover letter.

**COMMENTS**

1. Page 2-1, Section 2, "**Site Background**", 4<sup>th</sup> Sentence:

This sentence states that the site contained an underground storage tank, which supplied JP-4 fuel to propagate training fires. In other sections of this VCM Report, the JP-4 tank is referred to as an aboveground tank. NMED requests that HAFB clarify which type of tank this site contained.

2. Page 2-1, Section 2.1, "**Summary of Previous Investigations**", 1<sup>st</sup> Sentence:

NMED requests that HAFB indicate in this sentence when the fire training using waste oils, solvents and fuels started.

3. Page 2-1, Section 2.1, "**Summary of Previous Investigations**", 4<sup>th</sup> Paragraph, Last Sentence:

This sentence briefly mentions the excavation of petroleum-contaminated soil (PCS) from the North Excavation Area between 1996 and 1999. NMED requests that HAFB provide a more in-depth discussion of the 1996-1999 excavation activities, as described in the March

2002 Final Closure Report. This discussion must include the reasons for having to re-excavate the North Excavation Area during the subject VCM, as the March 2002 Closure Report concluded that all PCS had been removed.

4. Page 2-2, Section 2.2.1, "**Extent of PCS in Soil**".

NMED requests that HAFB provide a figure, to scale, that superimposes the extent of PCS (as determined by previous investigations) over the VCM excavations as shown on Figure 6.

5. Page 3-3, Section 3.2.2, "**South Excavation Sidewall Soil Analytical Results**", 3<sup>rd</sup> Sentence:

This sentence states "Concentrations in these samples did not exceed the associated SSLs". However, Table 3-2 shows Total C10-C32 TPH concentrations in sample FT31EX02-4 at 4,846,129 µg/kg, more than four times the adjusted residential SSL of 893,333 µg/kg. NMED requests that HAFB revise this section to address this exceedance, in conjunction with addressing Comment # 14 below.

6. Page 3-4, Section 3.2.3, "**North Excavation Sidewall Soil Analytical Results**".

The Section 3.2 soil sampling procedures indicated that samples would be collected at 3 feet vertical intervals at each sample location. A review of Table 3-3 shows that only one sample was collected from each of the 29 sample locations at the north excavation area, not at 3 feet vertical intervals. NMED requests that HAFB provide an explanation for this discrepancy.

7. Page 3-4, Section 3.2.4, "**Stockpile Analytical Results**", 1<sup>st</sup> Sentence:

This sentence states that 78 soil samples were collected from stockpiled soil. A review of Table 3-5 shows that only 63 sample results were reported. In addition, according to NMED calculations, approximately 9,200 cubic yards of "suspect" soils were generated. The Section 3.2 soil sampling procedures indicated that soil samples would be collected from "suspect" soils at approximately 1 per 100 cubic yards. This would require that approximately 92 samples of "suspect" soil should have been collected. NMED requests that HAFB explain these discrepancies and how they arrived at the number of samples.

8. Page 3-4, Section 3.2.4, "**Stockpile Analytical Results**", 2<sup>nd</sup> Paragraph, 1<sup>st</sup> Sentence:

This sentence states that FWENC samples were analyzed for TCLP RCRA metals, VOCs, SVOCs, reactivity and ignitability when TPH results were greater than 940 mg/kg. According to Table 3-5, two samples, FT31-SP09 and FT31-SP14, exceeded 940 mg/kg. However, none of the TCLP sample results are presented. NMED requests that HAFB submit a table showing all the TCLP results.

9. Page 3-5, Section 3.5, "Post VCM Groundwater Quality":

This section states that four new monitoring wells were installed to supplement the remaining two wells at this site. These new wells were installed for the new PCS landfarm at the site. However, no new wells were placed to the south or east of the East Excavation Area. As the groundwater flow direction is to the south-southeast, NMED requests that HAFB install one additional monitoring well to the south-southeast of the East Excavation Area within 50 feet of the area's boundary. Soil samples should be collected at 3 feet vertical intervals and a groundwater sample should be collected. Both soil and groundwater samples should be analyzed for VOCs, SVOCs and Target Analyte List (TAL) Metals. The metals are required as no other soil or groundwater samples collected during the characterization of this site were analyzed for metals, and waste oils were reported to have been burned at the site.

10. Page 3-5, Section 3.5, "Post VCM Groundwater Quality", 2<sup>nd</sup> Paragraph, seventh sentence:

NMED requests that HAFB revise this sentence to read as follows (additions underlined; deletions struck through): Data from the baseline groundwater sampling conducted for the proposed PCS landfarm on August 26, 2003 and from the first two rounds of quarterly groundwater sampling collected from wells (August 26 and November 8, 2003) (November 18, 2003 and February 20, 2004) ... are attached in Appendix B A.

11. **Figures 3, 5, 6, 7, 8, 9 and 10**

Site map figures must include a coordinate system (i.e., UTM, latitude/longitude), the boundaries of the site shown on the site map and the coordinates of site boundaries on the site map. High accuracy (+/-3 ft) GPS coordinates are acceptable. NMED requests that HAFB revise these Figures accordingly.

12. **Figures 7, 8 and 9**

There are numerous sample locations within the areas labeled as the "Excavation Upper Area". It is not clear why these samples were collected (e.g., were they sidewall samples?) and at what depths. NMED requests that HAFB explain this, as it is not made clear in the report's text.

13. **Figure 7**

The location of sample FT31EX06 is not shown. Sample location FT31EX09 is shown twice. In addition, the location of samples FT31EX 24 and FT31EX27 are not shown. NMED requests that HAFB revise Figure 7 accordingly.

14. **Figure 8**

The location of sample FT31EX02-4 is not shown. This is an important location as the Total Carbon Chain (C<sub>10</sub>-C<sub>32</sub>) results for this sample are more than four times the residential SSL.

NMED assumes that it is at the location of the point designated "ex02" at 4 feet above the groundwater table. However, this figure shows other sample locations away from the point designation (e.g., FT31EX02-9). NMED requests that HAFB clarify this issue.

**15. Tables 3-1, 3-2, 3-3, 3-4 and 3-5**

These tables show the NMED Residential and Commercial SSLs that were calculated using the data from NMED's February 2004 SSL Table A-1. This Table was updated in August 2004, and is available on the Hazardous Waste Bureau web page (<http://www.nmenv.state.nm.us/hwb/guidance.html>). NMED requests that HAFB revise these tables to show the Residential SSLs, as they appear on the updated August 2004 SSL table. The column for Commercial SSLs should be deleted, as this does not apply.

**16. Page 1 of 4, Table 3-1, "East Excavation Confirmation Sample Results":**

It is not clear where sample number FT31EX03B was collected. It does not appear on Figure 7. If it is a duplicate sample for FT31EX03, many constituents that were not detected in FT31EX03 are detected in FT31EX03B. In addition, there is no laboratory analytical report for FT31EX03B in Appendix A. NMED requests that HAFB clarify this issue and provide a copy of the laboratory analytical report for sample FT31EX03B.

**17. Page 1 of 4, Table 3-1, "East Excavation Confirmation Sample Results":**

The results for sample number FT31EX05 are not shown on this table. NMED requests that HAFB revise Table 3-1 to include the results for this sample.

**18. Page 1 of 4, Table 3-1, "East Excavation Confirmation Sample Results":**

The results shown for sample FT31EX11 do not match the data shown on the Appendix A laboratory report. The results shown are for FT31EX11A. NMED requests that HAFB revise Table 3-1 to provide the results for sample FT31EX11 and add another column to show the results for sample number FT31EX11A.

**19. Table 3-1, "East Excavation Confirmation Sample Results":**

NMED requests that HAFB revise the sample collection date for the following samples to read 25-Nov-02: FT31EX29 through FT31EX35.

**20. Pages 3 and 4 of 4, Table 3-1, "East Excavation Confirmation Sample Results":**

NMED requests that HAFB revise the sample collection date for samples FT31EX36 through FT31EX45 and FT31EX40D to read 2-Dec-02.

**21. Pages 3 and 4 of 4, Table 3-1, "East Excavation Confirmation Sample Results":**

NMED requests that HAFB revise this table to include the results for sample FT31EX43. In addition, the result for naphthalene in soil sample FT31EX49 should read 30 µg/kg.

**22. All Pages of Tables 3-2, "South Excavation Confirmation Sample Results":**

The results for 4-Methyl-2-Pentanone and Acetone are shown as NA (Not Analyzed). These constituents were, in fact, analyzed for. NMED requests that HAFB revise Table 3-2 to include the actual results.

**23. Table 3-2, "South Excavation Confirmation Sample Results":**

With reference to the Appendix A Laboratory Results reports, NMED requests that HAFB revise the sample results shown on this table for the following sample numbers to read as indicated (as µg/kg):

FT31EX01-9: Diethylphthalate – 1,900  
FT31EX01-17: Carbon Chain C10-C22 and Total (C10-C32) – 4,100 for both  
Diethylphthalate – 1,950  
FT31EX02-17: Carbon Chain C10-C22 and Total (C10-C32) – 5,100 for both  
Diethylphthalate – 1,770  
FT31EX03-1: 1,2,4-Trimethylbenzene (TMB) – 5.3  
1,3,5-TMB – 2.2J  
Benzene – 9.4  
Naphthalene – 8.9  
Xylenes, Total – 16  
FT31EX03-9: Diethylphthalate – 3,990  
FT31EX04-1: Benzene – 64  
Isopropylbenzene – 3.5J  
Methacrylonitrile – ND  
Naphthalene – 9  
FT31EX21-1: 1,2,4-TMB – 7.7  
1,3,5-TMB – 2.9J  
Ethylbenzene – 12  
Isopropylbenzene – 1.8J  
n-Propylbenzene – 1.6  
Xylenes, Total – 33

NMED has concerns about the fact that so many results did not match the laboratory reports. If there is an explanation, please provide it.

**24. Table 3-2, "South Excavation Confirmation Sample Results and Figure 8":**

The Appendix A Laboratory Results reports provide soil-sampling results for the following sample numbers: FT31EX23-1, FT31EX24-1, FT31EX25-1, FT31EX26-1, FT31EX27-9, FT31EX28-9, and FT31EX29-17. However, Table 3-2 does not show these results. In addition, the locations of these and other sample points, as shown on

Figure 8, are within an area that was excavated and do not appear to be sidewall samples. NMED requests that HAFB revise Table 3-2 to include the results for these samples and provide an explanation as to why these sample locations appear to be in an excavated area and not sidewall locations.

25. Tables 3-2, 3-3 and 3-5:

NMED requests that HAFB revise these tables to place a SVOCs ( $\mu\text{g}/\text{kg}$ ) header over 2-Methylnaphthalene and Diethylphthalate. They are not VOCs.

26. Table 3-3, "North Excavation Confirmation Sample Results":

The laboratory reports in Appendix A provide soil sample results for the following sample numbers: FT31EX28-09N, FT31EX29-09N, and FT31EX29-09ND. However, Table 3-3 does not show these results. NMED requests that HAFB revise Table 3-3 to include the results for these soil samples.

27. Pages 1 and 2 of 3, Table 3-3, "North Excavation Confirmation Sample Results":

NMED requests that HAFB revise the sample collection date for soil samples FT31EX01-01N through FT31 EX12-01N to read 16-Jun-03.

28. Table 3-3, "North Excavation Confirmation Sample Results":

With reference to Appendix A Laboratory Results reports, NMED requests that HAFB revise the sample results shown for the following sample numbers to read as indicated (as  $\mu\text{g}/\text{kg}$ ):

FT31EX01-01N:	Acetone – <u>15</u> Benzene – <u>2.1J</u> Ethylbenzene – <u>74</u> Isopropylbenzene – <u>7.5</u> n-Propylbenzene – <u>6.4</u> Naphthalene – <u>18</u>
FT31EX02-01N:	4-Methyl-2-Pentanone – <u>11</u> Acetone – <u>43</u> Benzene – <u>25</u> Ethylbenzene – <u>15</u> Isopropylbenzene – <u>1.25</u>
FT31EX03-01N:	4-Methyl-2-Pentanone – <u>25</u> Benzene – <u>1.1J</u> Ethylbenzene – <u>63</u> Isopropylbenzene – <u>3.3J</u> n-Propylbenzene – <u>3.0J</u> Naphthalene – <u>11</u>
FT31EX05-01N:	Diethylphthalate – <u>424</u>

FT31EX07-01N:	Diethylphthalate – <u>2,870</u>
FT31EX08-01N:	Diethylphthalate – <u>607</u>
FT31EX10-01N:	Acetone – <u>22</u>
FT31EX10-01ND:	Acetone – <u>20</u>
FT31EX11-01N:	C06-C10 – <u>27,000</u>
	C10-C22 – <u>52,000</u>
	Total (C10-C32) – <u>52,000</u>
FT31EX13-01N:	Diethylphthalate – <u>864</u>
FT31EX21-09N:	Diethylphthalate – <u>1,560</u>
FT31EX22-09N:	Diethylphthalate – <u>1,560</u>
FT31EX23-09N:	Diethylphthalate – <u>5,080</u>
FT31EX24-09N:	Diethylphthalate – <u>2,910</u>
FT31EX25-09N:	Diethylphthalate – <u>1,260</u>

In addition, the Sample Delivery Group (SDG) number for sample FT31EX19-01N should be revised to read 112273 and the sample collection date should be revised to read 16-Aug-03.

NMED has concerns about the fact that so many results did not match the laboratory reports. Provide an explanation for the discrepancies.

**29. Table 3-5, “Stockpile Sample Results”:**

This table has rows to show results for Barium TCLP and Selenium TCLP. However, all of the results are shown as NA (Not Analyzed). NMED requests that HAFB provide the reason for this.

**30. Pages 1 and 2 of 6, Table 3-5, “Stockpile Sample Results”:**

This table indicates that two stockpile samples, FT31-SP09 and FT31-SP14, had TPH concentrations in excess of the residential SSL. NMED requests that HAFB provide a confirmatory statement that the soil from which these samples were taken was disposed of off-site and not used as backfill material.

**31. All Pages of Table 3-6, “Groundwater Analytical Results, MW-07 and MW-10”:**

NMED requests that HAFB revise this table to read ND (not NA) for the results for VOCs and SVOCs for MW-7 and MW-10.

**32. Appendix A, Table 3-1, and “Laboratory Analytical Results”:**

Appendix A presents results for soil sample numbers FT31EX01, FT31EX02, FT31EX03, and FT31EX04 collected on 18-Nov-02 (SDG #102529) that shows TPH concentrations as ND. Appendix A also presents results for sample numbers FT31EX01, FT31EX03, and FT31EX04 collected on 21-Oct-02 (SDG #101132) that shows TPH concentrations that are greater than the Residential SSL. The 21-Oct-02 results are not reported on Table 3-1. NMED requests

that HAFB explain the difference between the 21-Oct-02 samples and the 18-Nov-02 samples, and why the 21-Oct-02 results are not shown on Table 3-1.

**33. Appendix A, "Laboratory Analytical Results" and Table 3-4**

- a) Appendix A presents results for soil sample numbers FT31-SS01, FT31-SS02, FT31-SS03, and FT31-SS04. However, these results are not shown on Table 3-4. NMED requests that HAFB revise Table 3-4 to include these results and explain how the designator "SS" differs from the designator "SP".
- b) In addition, samples FT31-SS01, FT31-SS02, FT31-SS03, and FT31-SS04 had TPH concentrations in excess of the Residential SSL. NMED requests that HAFB provide a confirmatory statement that the soil from which these samples were taken was disposed of off-site and not used as backfill material.

**34. Appendix A, "Laboratory Analytical Results", Table 3-4 and Table 3-5:**

Table 3-4 provides results for sample numbers FT31-SP01, FT31-SP02, and FT31-SP03. Appendix A only includes laboratory reports for FT31-SP01, and the results are shown correctly on Table 3-4. However, sample results for FT31-SP01, FT31-SP02, and FT31-SP03 are also shown on Table 3-5, and the sample results shown for FT31-SP01 do not match the laboratory report. There are no laboratory reports for samples FT31-SP02, and FT31-SP03, so it is not known if these results are shown correctly. NMED requests that HAFB revise Tables 3-4 and 3-5 accordingly and provide laboratory analytical results for samples FT31-SP02, and FT31-SP03.

**35. Appendix A, "Laboratory Analytical Results":**

Laboratory Analytical Results reports for all of SDG #109903 (19 soil samples), collected on 23-Apr-03, and for all of SDG #110589 (40 soil samples), collected on 8-May-03, are not included in Appendix A. The results for these samples are shown on Table 3-2. In addition, laboratory results are missing for sample numbers FT31EX20-1 (SDG #109902) and FT31-SP02 through FT31-SP34 and FT31-SP42 through FT31-SP59.4. NMED requests that HAFB provide copies of the laboratory reports for all of these samples.