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**ENVIRONMENT DEPARTMENT**

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**RON CURRY**  
SECRETARY

**DERRITH WATCHMAN-MOORE**  
DEPUTY SECRETARY

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

January 17, 2006

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

**SUBJECT: NOTICE OF DEFICIENCY: SUPPLEMENTAL RCRA FACILITY  
INVESTIGATION WORK PLAN, SOLID WASTE MANAGEMENT  
UNITS 101, 104, 105, 108, 109, 113B, 115, 116, 165, 177, 179 and 181,  
JULY 2005  
HOLLOMAN AIR FORCE BASE EPA ID NO. NM6572124422  
HWB-HAFB-05-006**

Dear Ms. Hartell:

The New Mexico Environment Department (NMED) has reviewed the Supplemental RCRA Facility Investigation (RFI) Work Plan for Holloman Air Force Base's (HAFB's) Solid Waste Management Units (SWMUs) 101, 104, 105, 108, 109, 113B, 115, 116, 165, 177, 179 and 181 for technical completeness. Based on this review, NMED has determined that the Work Plan cannot be approved at this time, as revisions are necessary. The following are the deficiencies that HAFB (the Permittee) is required to address before the Work Plan can be approved.

## **GENERAL WORK PLAN DEFICIENCIES**

1. Although the NMED agreed to review this multiple-site Work Plan as submitted, the Permittee is required to submit individual (stand-alone) investigation reports for each site (i.e. LF-10, LF-19, LF-21, LF-22, LF-23, LF-29, DP-30/SD-33, and SS-39). The individual reports may either be bound into one document or submitted separately.
2. The Permittee is required to submit trenching plans for all landfills for NMED approval after the geophysical surveys are conducted at each site and the results are interpreted (except LF-29, due to the potential presence of unexploded ordnance). This shall include LF-10, where trenching was not proposed. These plans must show the locations and depths of all trenches and provide the rationale for their selection. Trenching must be performed at the landfills to characterize their contents, regardless of the results of the geophysical surveys. If potentially hazardous materials are encountered, the NMED must be notified within 24 hours. Any potentially hazardous materials encountered during the trenching must be removed and disposed of in accordance with appropriate regulations and the subject work plan. Soil samples must be collected just below any potentially hazardous materials and at the water table below the material. Analytical parameters and the number of samples are to be determined after consultation with the NMED and will be dependent on the type(s) and quantities of potentially hazardous material found.
3. The Permittee is required to analyze all ground water samples at all sites where ground water samples are collected for Total Dissolved Solids (TDS).
4. **Appendix J, Quality Assurance Project Plan (QAPP) Addendum, Page 1-1, Section 1.0, Introduction, 3<sup>rd</sup> Paragraph, 2<sup>nd</sup> Sentence**

This sentence states "This QAPP Addendum, in conjunction with the RFI Field Sampling Plan (FSP) presented as Appendix A of the project Work Plan, constitutes the RFI Sampling and Analysis Plan (SAP)". Appendix A of the subject Work Plan is "Records Search". An Appendix for the FSP is not apparent. Therefore, the Permittee is required to submit the FSP for NMED review.

5. **Appendix J, Quality Assurance Project Plan (QAPP) Addendum, Page 5-1, Section 5.0, Quality Control Objectives**

This Section indicates that the project method analyte lists and method sensitivity requirements are presented in the Basewide QAPP. The Permittee is required to submit the project analyte lists with the method detection limits (MDLs) for each analyte that are reflective of the proposed work and the requirements of this Notice.

6. **Figures 1.2, 2.1, 2.6, 2.7, 2.8, 2.9, 2.10, 2.12, 2.13, 2.15, 2.16, 2.18, 2.19, 2.21, 2.22, 2.24, 2.25, 2.26, 2.27, 2.29, 2.30, 2.31, 2.33, 2.34, 2.35, 2.36, 2.37 and 3.1**

NMED requires that site figures include a coordinate system (i.e., UTM, latitude/longitude) and the boundaries of the site(s) shown on the figures. GPS coordinates (+/-3 ft accuracy) of site boundaries are acceptable. The Permittee is required to revise and resubmit these figures.

#### SITE-SPECIFIC DEFICIENCIES

7. **LF-10 (SWMUs 101 and 109)**

The Work Plan proposes that passive soil gas samples will be collected at 100-foot intervals for VOC analysis. The Permittee must collect these samples at 50-foot intervals to provide sufficient coverage.

8. **LF-29 (SWMU 104)**

The Work Plan does not propose a passive soil gas survey for this site. The Permittee is required to conduct a passive soil gas survey at this site in accordance with the methodologies specified in Section 3.6.3, Passive Soil Gas Surveys. Gas samples are to be analyzed for VOCs at 50-foot intervals. In addition, all soil samples collected at this site must be analyzed for perchlorate in addition to the proposed analyses for VOCs, SVOCs, RCRA Metals, TPH and explosives. Ground water samples from monitoring wells MW-29-01, MW-29-05, MW-29-07 and MW-29-08 must also be analyzed for perchlorate and TDS.

9. **DP-30/SD-33 (SWMU 113B)**

- a. The Work Plan proposes that waste samples are to be analyzed using TCLP methodology. The Permittee is required to analyze all waste samples for total levels of contaminants. This will include analysis for VOCs, SVOCs, Target Analyte List (not RCRA) Metals, TPH, herbicides, pesticides, and PCBs. TCLP can be used to characterize any excavated waste for disposal purposes.
- b. The Work Plan proposes biennial (every two years) ground water monitoring at this site. Based on analysis of ground water flow velocity estimates, the Permittee is required to conduct ground water monitoring at this site semi-annually (twice a year). The Permittee is required to submit a semi-annual ground water monitoring plan for NMED approval that includes the installation of an additional ground

water monitoring well immediately downgradient (south of) borings SB30&33-02 and SB30&33-07, as shown on Figure 2.27. Ground water must be analyzed for VOCs, TAL Metals and TDS.

**10. SS-39 (SWMUs 165, 177, 179 and 181)**

- a. The Work Plan indicates that contaminants of potential concern (**COPCs**) from fuels used at this site include unsymmetrical dimethylhydrazine (**UDMH**) and aniline, which are both RCRA toxic hazardous constituents (U098 and U012, respectively) as listed in Appendix VIII to 40 CFR 261. There is no evidence that these constituents have ever been analyzed for in soil or ground water at this site. Therefore, the Permittee must submit a work plan for NMED approval to analyze all ground water samples collected at this site for these constituents. In addition, this work plan must include the collection of new soil samples to be analyzed for UDMH, aniline and RCRA Metals. These samples must be collected from the following former boring locations: HA-39-01 (the oxidizer spill drainpipe outlet), HA-39-02 (the propellant spill drainpipe discharge box), and SB-39-01 and SB-39-02 (the building 1176 drainage trough discharge sumps). Soil samples must be collected from 2 – 4 feet below ground surface (**bgs**) and 8 – 10 feet bgs.
- b. Additional investigation requirements for site SS-39 were described in NMED correspondence dated February 9, 2005. These requirements included, among other things, the installation of ground water monitoring wells downgradient of the source area no more than 200 feet apart. The locations of the proposed wells, as shown on Figure 3.1, do not satisfy this requirement. The February 9, 2005 correspondence also required that ground water be analyzed for VOCs, SVOCs, RCRA Metals and perchlorate. The Work Plan only proposes analysis of VOCs and perchlorate. NMED agrees that SVOCs are not COPCs (with the exception of aniline) and, therefore, do not have to be analyzed for. However, metals are COPCs, as evidenced by concentrations of cadmium, chromium, arsenic and lead in various soil samples in excess of residential, industrial and construction worker soil screening levels established by the NMED. Therefore, the Permittee is required to analyze all ground water samples for RCRA Metals and TDS, as well as VOCs and perchlorate. In addition, the February 9, 2005 NMED correspondence required that samples from the existing and proposed monitoring wells be collected on a quarterly or semi-annual basis over a two-year period. The Work Plan only proposes biennial sampling. Based on ground water flow velocity estimates, the Permittee is required to collect samples on a semi-annual basis (i.e. twice a year) over a minimum of a two-year period.

Based on the above, the Permittee is required to submit a work plan for NMED approval for the installation of three (3) additional monitoring wells at the approximate locations shown on the attached copy of Figure 3.1. The work plan must include analysis of ground water from all wells sampled for VOCs, RCRA Metals, UDMH, aniline, perchlorate and TDS on a semi-annual basis for a minimum of two years. It is possible that the analytical parameters may be adjusted over time.

- c. **Page 2.31, Section 2.2.9, SS-39, 5<sup>th</sup> Paragraph, 2<sup>nd</sup> Sentence:** This sentence indicates that the Remedial Investigation (RI) ground water analytical results are provided in Table 2.33. The Work Plan does not contain a Table 2.33. NMED assumes that this refers to Table 2.24. The Permittee must confirm this or provide written clarification.
- d. **Table 2.25, Last Page:** This table shows "Result" columns for borings 179-BPH01, 179-BPH02 and 179-BPH03; however, all the results are shown as "NA", meaning "not analyzed". In addition, these three borings are not shown on any of the SS-39 figures provided in the Work Plan. The Permittee must explain why these borings were included on the table if all results were "NA" and to resubmit a figure showing the locations of these borings and a tabulation of any results.
- e. **Figure 2.30:** The Permittee is required to revise and resubmit this figure to depict the locations and boundaries of all four SWMUs related to this site. This revision must include the approximate location of SWMU 165, the building 1176 pond.
- f. **Figures 2.37 and 3.1:** These figures show TCE concentrations in the ground water. However, the unit of measurement for these concentrations is not provided. In addition, the location of DPT boring SS3911 is not shown. The Permittee is required to revise and resubmit these figures showing the unit of measurement (i.e.  $\mu\text{g/L}$ ) for TCE concentrations, the location of boring SS3911, and the corresponding TCE concentrations.
- g. **Appendix H.8, SS-39 Boring/Drilling Logs:** Boring/drilling logs are not provided for the following borings; SB-39-01, SB-39-02, 179-A01, 179-A02, 179-A03, 179-A04 and 179-A05. The Permittee is required to submit copies of these logs.

Please respond to this Notice of Deficiency within sixty (60) calendar days of receipt of this letter.

Ms. Debbie Hartell

January 17, 2006

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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 of my staff at (505) 222-9526.

Sincerely,



James P. Bearzi

Chief

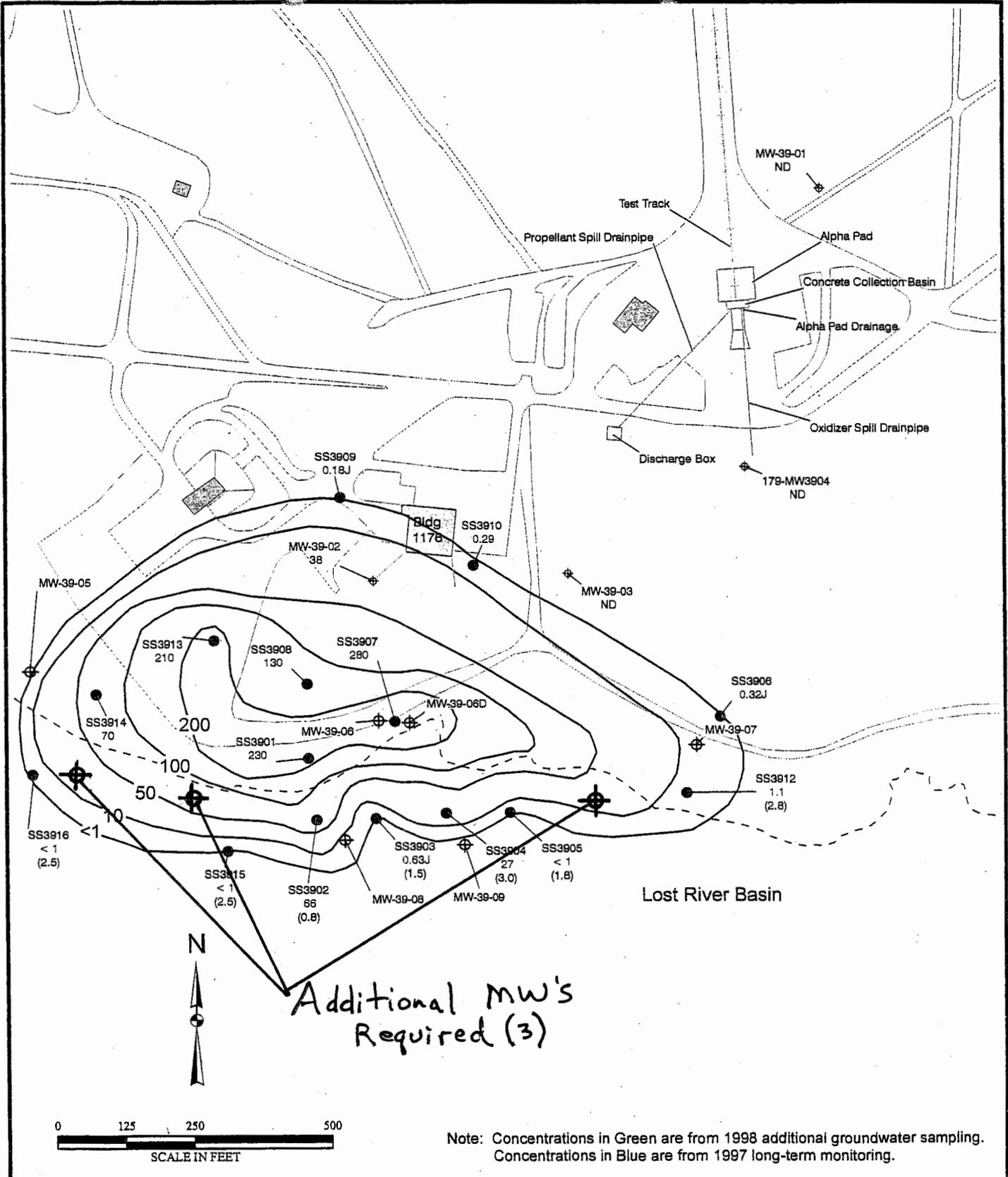
Hazardous Waste Bureau

JPB:ds

Attachment

cc: J. Kieling, NMED, HWB  
W. Moats, NMED, HWB  
C. Amindyas, NMED, HWB  
D. Strasser, NMED, HWB  
D. Tellez, EPA, Region 6 (6PD-F)  
D. Holmquist, HAFB

File: Reading and HAFB 2005



File X:\AFC002\Holloman AFB\TO37\Maps\RCRA\_Work\_Plan\SS-39\_Proposed\_Samples.mxd  
 Project: AFC002-037-04-11-02  
 Revised: 7/28/05 TH  
 Map Source: Holloman AFB



**Legend**

- ⊕ Monitoring Well (1997 Data)
- DPT Location (1998 Data)
- (2.5') Depth to Water (Fl.) (1998)
- Trichloroethene Contour
- ⊕ Proposed Monitoring Well

**Figure 3.1**  
**Proposed Monitoring Well**  
**Locations**  
**Site SS-39**