



HAFB



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Mr. David Cobrain
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Dr. E, Bldg 1
Santa Fe, NM 87505

RE: Draft Technical Review Comments on the Final RCRA Facility Investigation
Work Plan, SWMUs 122 and 123, Holloman Air Force Base, June 2009.

Dear Mr. Cobrain:

Attached are draft technical review comments on the Final RCRA Facility Investigation Work Plan, SWMUs 122 and 123, Holloman Air Force Base, dated June 2009. A review of the Work Plan was requested by Mr. David Strasser in an email dated September 9, 2009.

While AQS did not review the draft final version of this Work Plan, previously submitted Notice of Disapproval (NOD) comments from NMED (dated May 22, 2009) included a request to discuss how a risk assessment would be conducted (NOD No. 4). The risk methodology was provided in Section 7 of the Final Work Plan. Overall, the information provided in Section 7 was limited in nature and vague and the assessment of the response provided by the facility is deemed "not adequate". Several comments have been drafted and are provided in the attached.

In reviewing the data contained in the figures of the Work Plan, several constituents were identified as having site concentrations above the 2006 NMED soil screening level (e.g., xylene and toluene). One of the changes made in the 2009 NMED soil screening levels is that all levels are now risk-based data. The screening levels in the 2006 guidance included some action levels that were based on saturation (e.g., xylene and toluene). Thus, when the facility conducts the risk screening using the 2009 generic soil screening levels, some constituents which initially may have been thought to be a risk driver, may not contribute significantly to overall risk.

In the attached Comment No. 9, the use of the term "hazard index" is addressed. It is noted that the facility may have adopted the use of this language based on the wording of the May 22, 2009 NMED NOD. While the use of the term "hazard index" is not appropriate in this context, NMED may wish to consider this comment so as not to appear self-contradicting.

If you or any of your staff have questions, please contact me at (801) 451-2864 or via email at paigewalton@msn.com.

Thank you,

Paige Walton
AQS Senior Scientist and Project Lead

Enclosure

cc: David Strasser, NMED (electronic)
Joel Workman, AQS (electronic)

**Draft Technical Review Comments on the Final RCRA Facility Investigation Work Plan,
SWMUs 122 and 123, Holloman Air Force Base, June 2009**

1. The Work Plan only addresses human health risk assessment. While there is some mention of non-human receptors throughout the Work Plan and Section 4.4 identifies potential receptors present at the site, there is no specific discussion of how an ecological risk assessment will be conducted. Either sufficient evidence must be provided to justify why an ecological risk assessment is not warranted (i.e., lack of sufficient habitat due to small area and industrial uses) or the Work Plan must be revised to include the methodology that will be used to assess ecological risk. Revise accordingly.
2. The Work Plan includes use of NMED screening levels from 2006 NMED Soil Screening Guidance and Region 6 Medium Specific Screening Levels (MSSLs) dated 2008. Please note that NMED updated the 2006 Screening Guidance and an August 2009 version is available on-line (<http://www.nmenv.state.nm.us/hwb/guidance.html>). Region 6 MSSLs are no longer applicable and have been replaced by the United States Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) (http://www.epa.gov/region06/6pd/rcra_c/pd-n/screen.htm). All data collected as part of this Work Plan (and all previously collected data combined with the proposed data) must be compared to the 2009 NMED Screening Levels. If an NMED screening level is not available, then data should be compared to the 2009 RSLs. Note that in the event that neither an NMED screening level, an RSL, or appropriate surrogate data are available, potential risks to the constituent must be addressed in the uncertainties section of the risk assessment. Revise accordingly.
3. Section 1.1. A bullet was added to address the “site-specific” risk assessment protocol contained in Section 7. This Section also includes the methodology for conducting the initial generic screening assessment to determine whether additional risk evaluation is warranted. It is suggested that this bullet be revised to remove the reference to site-specific risk assessment and just reference risk assessment methodologies.
4. Section 6.3.2.1. The newly added text indicates that if a risk assessment is required, geotechnical data will be collected. This phrasing is misleading as a risk assessment (screening assessment) is required to demonstrate that the site meets either residential or industrial levels. While the level of risk assessment may be limited to use of generic screening levels, an overall risk must be determined. It is suggested that the text be revised to indicate a “site-specific” risk assessment.
5. Section 7.1. The text indicates that all constituents of potential concern (COPCs) will be compared to the analyte-specific screening levels (NMED screening levels, RSLs, or NMED total petroleum hydrocarbon guidance screening levels). However, the text does not indicate if any conclusions will be drawn from the comparison. Clarify the intent of this section.
6. Section 7.2.4. The maximum detected concentration will be compared to the risk-based screening levels referenced in Sections 6.2.1.1 (soil) and 6.2.1.2 (groundwater). The text is not clear that cumulative risk/hazard will be determined and only if cumulative risk and/or

hazard are below the NMED target levels (1E-05 for carcinogens and hazard index of 1.0 for noncarcinogens) will the site be proposed for no further action. Clarify the text to indicate that cumulative effects will be determined.

7. Section 7.2.4. As noted in both the technical guidance for the NMED screening levels and the RSLs, the use of the generic screening levels is only appropriate for those exposure pathways used in developing the screening levels. Inhalation of vapors from the vapor intrusion pathway is not included in the generic screening levels. If volatile organic compounds (VOCs) are present in either soil or groundwater and are identified as COPCs, then the risks/hazards via the vapor intrusion pathway must be determined and combined with the risks/hazards contributable from the generic screening levels. Evaluation of the vapor intrusion pathway is not limited to only a site-specific risk assessment. Revise the text accordingly.
8. Section 7.2.5. In the event that a site-specific screening level needs to be calculated, the Work Plan indicates that toxicological data provided in the NMED screening guidance will be used. The toxicological data provided in the screening tables is for reference only, to indicate the current toxicological data that were available and used at the time the screening levels were derived. A review of toxicological data (following the hierarchy of sources listed in the NMED Soil Guidance) should be conducted prior to calculating a site-specific screening level to ensure that the most recent toxicological data are being used. In the event that a screening level provided in the NMED tables has not been updated to reflect new toxicity data, the potential for under/over-estimation of risk/hazard should be addressed in the uncertainties analysis of the risk assessment. Revise the text accordingly.
9. Section 7.2.5. It appears that the Work Plan proposes to calculate risk ratios based upon the 2006 NMED Soil Guidance. However, the use of the term hazard index is slightly confusing, as this infers only non-carcinogenic hazard will be assessed. The preferred method is to determine cumulative risk. However, while use of the ratio may still be applied if preferred by the facility, it is suggested that the term “hazard index” be replaced by “risk ratio.”
10. Section 7.2.5. The text addressing development of site-specific screening levels is vague. It appears that if site concentrations are above the generic screening levels, then site-specific parameters (mostly geological and hydrogeological) will be used to fine-tune the generic levels. However, the Work Plan does not provide any discussion as to what steps will be taken in the event that site concentrations are above the site-specific screening levels. Add some clarifying text that, in the event site concentrations are above the site-specific screening levels, either removal actions and/or a site-specific risk assessment will be conducted.
11. Section 7.2.6. The text does not provide specific discussion as to what constitutes a “representative” site concentration. Revise the Work Plan to provide additional detail. Also note, that NMED and USEPA guidance recommend the use of the 95% upper confidence level (UCL) of the mean as the exposure point concentration in risk assessments. The UCL should be determined using distributional-based statistical methods (e.g., USEPA’s ProUCL).

12. Section 7.2.6. The Johnson and Ettinger (J&E) model is appropriate for determining exposure concentrations via the vapor intrusion scenario. However, because the J&E model is several years old, the toxicological data included in the model is not current and thus the model should not be used to calculate resulting risk/hazard. Revise the Work Plan accordingly.